

Cross-cultural issues in Norwegian-Indian software outsourcing relationships, a structurational analysis

Cand. Scient. Thesis

Bernt Loch



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Preface and acknowledgements

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Chapter 1 introduction

1.1 Presentation

The start of the new millennium has put forth various debates, especially in the western world, regarding the lack of skilled information technology (IT) workers and strategies to meet this fast growing skills gap. Norway is no exception, with an estimated shortage of engineers in 2010 (Stølen, 2001). In order to minimize this rising challenge of skill shortage, firms are forced to look outwards for qualified IT-workers at lower costs. The Norwegian Prime Minister led a delegation (Information and Communication Technology-Norway) of more than 30 ICT companies in 2001 to India to facilitate business networking between Indian and Norwegian IT companies. With the US economy slowdown serving as a backdrop, this business meeting was also part of a broader NASSCOM¹ initiative to expand into new markets such as Scandinavia and East Asia as a means to mitigate the risk of “putting all their eggs in one basket (the US).”

The economic recession of the late nineties has somewhat increased the need for western firms to focus on developing a more competitive approach to get better value from their resources. They are seeking destinations like India, Russia and Israel where they can obtain software development resources at lower cost as compared to in-house or in-country development. However, the Norwegian business market has been slow to adopt this process. It is commonly assumed that the Norwegian business mentality is risk averse and conservative, avoiding projects where control may be lost (Imsland et al., 2003). Indian IT exports to Norway was in 2001 US\$ 10 million, and expected to increase to US\$ 100 million in 2004-05 and subsequently to US\$ 250 million by 2008 (NASSCOM). However given the size of Norway's population and its location, the scope for expansion of imports to Norway from India is rather limited. In 2003, 72% of Norway's total imports were from the E.U. Nevertheless, Norway's advanced technology in areas such as web-enabled and mobile technologies can potentially be effectively utilized in mutual cooperation and Joint Ventures (JV). This potential, coupled with India's IT expertise developed over the last 20 years, lays the foundation for a mutually beneficial relationship between Norwegian and Indian firms.

A distinctive aspect of software related work is the variety of social and human issues that come into play during the phases of design, development and implementation, especially in globally dispersed systems (Krishna et al. 2004). The analysis of the human side in Global Software Alliance (GSA from hereon) projects is to some extent neglected, or simply not regarded as being vital for the well being of the GSA project. The increased complexity that a GSA project introduces to the involved participants raises the need for a tight and mutually beneficial relationship between the firms.

¹ NASSCOM is India's National Association of Software and Service Companies

Differences in mindsets or work habits between participants from the two sides are potential sources for conflict. These differences spring from deep-set cultural issues, and thus cannot be removed through a superficial kind of training.

GSA is increasingly being considered as a key strategy of major corporations to meet their IT needs and to bridge their growing skills gaps. GSA agreements can be described as a long-term relationship between firms based in geographically separate locations to enable software development to be carried out in a coordinated fashion involving real time or asynchronous interaction (Sahay et al., 2003). The improvement in technical solutions and successful experiences of many large firms, e.g. Texas Instruments and Nortel, has contributed to the growth in the GSA industry. GSA takes place in an extremely dynamic and diverse marketplace that is populated by organizations, big and small, from countries both developed and developing (Sahay et al., 2003). Rapid upgrades in ICTs have reduced the cost of communication and increased the scope of operations so that even relatively small companies can potentially have business relationships and address markets in different geographical domains (Sahay et al., 2003). The acceptance by the business community of GSA as a feasible software development strategy has been a vital factor in moving offshore development work from low skill tasks towards complex full scale software development projects. GSA potentially offers considerable advantages, such as lower costs, access to skills and reduced time to market. However, the achievement of these benefits is extremely complex in practice, because of challenges related to issues of time, distance and cultural differences between the GSA partners². The focus of this thesis is on understanding cultural issues, and the variety of complexities they introduce into the management of GSA relationships.

Cross cultural issues are an important factor for the involved actors, making outsourcing software production far from a trouble free process (Sahay et al., 2003), and get magnified in more complex projects. This makes awareness and comprehension of cultural challenges vital to managing GSA's more efficiently and effectively. An important aspect of cultural issues concerns ethics. Western culture and management methods impact upon local settings, potentially bringing forth a cultural imperialism. This "cultural convergence brought about by ubiquitous Western mass media bringing images, symbols, products and entertainment into developing nations" (Nicholson and Sahay, 2001, pp39). Another notion is the potential for "E-sweatshops", a term coined in more traditional industries, enabling "exploitation of developing countries for cheaper labor costs due to the ease of shifting production facilities overseas" (Nicholson and Sahay, 2001, pp 39). Lastly, the potential effect globalization has on members separated by time and space, disembedding local team members from the social relationship in an organization.

² The benefits and risks in GSA will be further elaborated in chapter 2.

The intent of this thesis is to understand these cultural issues and how they influence the GSA process in a Norwegian and Indian environment. More specifically, it emphasizes how small sized firms can use GSA's to gain an advantage in the Norwegian software market. The motivation for this research is the assumption that cultural issues pose vital challenges to making a successful GSA project. To identify and understand the potential challenges, GSA collaboration presented in a cultural perspective might help to ease some of the problems in the process, and thus raise the capacity of the partners to leverage more fully the potential benefits. Furthermore, the intent of the research is to help develop guidelines to practically help firms to improve their strategy and effectiveness in project deliveries.

1.2 GSA, the global marketplace

Outsourcing has grown rapidly globally and in particular from the United States, as organizations view software outsourcing as a way to achieve strategic goals, reduce costs, improve customer satisfaction and provide more efficiency and effectiveness (Klepper and Jones, 1998). The diversity of the countries involved contributes to the increased cultural challenges the actors have to deal with both in selecting partners and in managing the relationship over time. Goodall (2002) argues that the lack of rich descriptions of cross-cultural interaction, and theoretical explanations of the same, impede our understanding of the complex relationship. I now discuss some of the key actors in the GSA marketplace, with a focus on the big three service providers: India, Israel and Ireland.

1.2.1 India

The champion of global software alliances provider is India. “India dominates 80-90 per cent of the total of offshore development revenue worldwide and is expected to be a key leader in offshore outsourcing in the next 5 years” (Khan et al., 2002, pp 2). India has the advantage of a highly competent and large talent pool of world class quality, high process maturity, competitive cost structures, rapid delivery capability and a large English speaking resource pool (Moitra, 2001). With now more than two decades of experience in such work, Indian firms are seen to hold a maturity that is not evident in new entrants like China.

1.2.2 Israel

Israel is considered to be more creative and innovative than Ireland and India. A host of factors such as public policy initiatives, high R & D spending, a highly educated population, English-language ability, tax incentives, market support for software exports and a large expatriate Jewish population has facilitated strong links to markets abroad, especially in the US (Sahay et al., 2003).

1.2.3 Ireland

Ireland has the advantage of a strong technological infrastructure, EU membership, a sound technical education system, English language competence, proximity and cultural similarity with UK and USA (Sahay et al., 2003). The Irish government has consciously promoted a strategy of attracting Major National Corporations (MNC) investments into the country.

In addition to the “big three”, there are several other countries newly active in GSA, including Vietnam, Taiwan, Russia, Singapore, China and Philippines (Khan et al., 2002). These new countries pose a potential challenge for India’s position in the future. There are also other emerging actors: Singapore, Malaysia, Pakistan, and Sri

Lanka in Asia, Brazil and Chile in South America, Hungary, Romania, and Ukraine in Eastern Europe and Egypt in the Middle East (Sahay et al. 2003).

The variances in cultural characteristics amongst the actors potentially raise different challenges for the actors. Patterns of behavior are culturally specific and relatively taken for granted by the local population, but are less explicit for an outsider, implying the challenge of interpreting the actions and attitudes of individuals and organizations operating in contexts quite different from their own (Yousefi, 2003). Conversely, some countries enjoy advantages through their cultural similarities or shared history with outsourcing partners. For example: Ireland has cultural similarities with EU and the US, which makes it popular, even though cost factors are rapidly diminishing Ireland's advantage. Israel has cultural links to the American market based on its expatriate Jewish populations. India has years of experience with the American market and links to the UK through the Commonwealth and the colonial legacy. These cultural similarities may contribute to building some shared meanings and understandings, and thus ease some of the cross-cultural challenges in GSA work.

1.3 Different strategies for GSA

It is often found that GSA relationships start with direct outsourcing arrangements and move to Joint Ventures (JV) and over time to a wholly owned subsidiary. The more advanced models like JVs put more emphasis on developing cross-cultural understanding. The cultural challenges are often overcome, as familiarity and closeness in the organizational form evolves. The early strategy for software outsourcing was mostly based on on-site collaboration, also known as “body-shopping.” This strategy was widely used by Indian firms in the eighties, where programmers were sent to the US or Europe and conducted the work there for the length of the project rather than doing it offshore. The advantages of this strategy include low investments for the customer (Khan et al., 2002). The software outsourcing process has evolved dramatically in recent years and various distinct cooperation forms have emerged. Some of them are discussed below.

1.3.1 Direct outsourcing

Direct outsourcing is regarded as the most common strategy in GSA projects (Gallivan and Oh 1999). In this form, the customer firm coordinates work with the firm contracted to do the offshore development work (Khan et al., 2002). The projects can range from full lifecycle projects to the development of small modules. Challenges in direct outsourcing lie in understanding local laws, regulations, infrastructure and selecting the right outsourcing partner. Furthermore, transferring the project requirements is regarded as fairly difficult. Cultural differences add challenges to the planning and presentation of deliverables (Khan et al., 2002); as presentation formats and work practices need to be continually “translated” from one cultural setting to another. Depending on the complexity of the outsourced work, direct outsourcing can be somewhat limited in terms of relationship building. A variant of this strategy is multiple outsourcing, where the customer firm uses several different software suppliers (Khan et al., 2002), which reduces the risk of individual suppliers, while raising the challenge of coordination (Gallivan and Oh 1999).

1.3.2 Through a third party supplier

In this strategy, marketing agents or a third party firm manages the project. This can relieve the outsourcing firm from some of the project responsibilities, such as employing new people, coordinating work and deploying the applications (Khan et al., 2002). Challenges that can arise using this strategy concern losing touch with the project and lack of local cultural familiarity, which can lead to failure in the deliveries of the product (Khan et al., 2002).

1.3.3 Joint venture

A popular method for management of both the client and vendor, to satisfy their objectives of expanding business, is known as a JV. JV offers the opportunity for both the partners for cross fertilization of skills and resources, by forming a new company for joint collaboration. JVs can be a valid strategy when software companies are entering new markets (Khan et al., 2002). Local partners bring knowledge of the domestic market, familiarity with government bureaucracies and regulations, understanding of local labor markets and possibly providing access to existing manufacturing facilities. Foreign partners can offer advanced process and product technologies, management know-how, and access to export markets (Miller et al., 1996). The rationale of a JV is related to the benefits of risk-sharing, resource-pooling, asset-protecting, and enabling timely responses to market-changes.

Managing a JV-relationship require time and effort from the actors to bridge the cultural gap that can arise in this collaboration strategy. This new JV-entity is characterized by the partners' resource commitments in exchange for shared management, risks and rewards (Anderson and Gatignon, 1986). A perceived risk of a JV can be a conflict of interest between the two sides with the contractor wanting to minimize the development costs, while the software supplier seeking to maximize revenues from software development.

1.3.4 Wholly owned subsidiary

Some business organizations set up wholly owned facilities overseas to perform parts of the software development process. The most common practice is to perform system analysis and design work at the client's site, while the rest of the development process is done from the offshore development centers (Khan et al., 2002). This strategy can also be used in a client mode, where a client can set up a development centre in the country where the software supplier is located or buy an existing organization (Carmel and Agarwal 2001). This strategy makes it easier to meet the requirements specifications since the two parties are located in the same country (Khan et al., 2002). It enables a closer cooperation due to lessening the effect of distance, although it requires experience from the actors to building companies offshore. This organizational form helps to outsource work subject to intellectual property concerns as compared to third party outsourcing.

The different strategies discussed above shape GSA relationship in different ways. Selecting a form of collaboration is dependant on the size and complexity of the project to be outsourced and the long-term strategic intentions of the firms. Furthermore, as projects evolve, the form of collaboration may need to be redefined, bringing into play different cultural challenges.

Table 1.1 summarizes some of the cultural complexities associated with the different forms of collaboration.

Table 1.1: Cultural complexities in GSA strategies.

Strategy	Cultural complexities
Direct outsourcing	<ul style="list-style-type: none"> • Limited relationship building takes place. • Difficulties in knowledge sharing.
Third party supplier	<ul style="list-style-type: none"> • Limited relationship building takes place. • Difficulties in knowledge sharing.
Multiple outsourcing suppliers	<ul style="list-style-type: none"> • Limited relationship building takes place. • Increased communication and coordination skills needed.
Joint ventures	<ul style="list-style-type: none"> • Needs experienced GSA teams. • Close cooperation is required.
Wholly owned subsidiary	<ul style="list-style-type: none"> • Needs experienced GSA teams. • Close cooperation is required.

1.4 Research questions

This thesis focuses on the collaboration between small and medium sized Norwegian and Indian software firms separated by time, space and culture. The aim is to identify potential cultural challenges that arise in a GSA project within a Norwegian-Indian perspective. This is an interesting area of study, seeing that Norwegian firms have not built up an extensive experience in this area, and rewards to date have been limited. These issues are important to address in order to create a better understanding of the challenges and opportunities of GSA's and contribute to raise the value of outsourcing. From the Indian side, working with Norwegian firms is relatively virgin territory, and the cultural challenges are poorly understood. These issues raise the two central questions of the thesis:

- *What are the cultural challenges of GSA work in the context of Norwegian and Indian GSAs?*
- *How can they be managed more effectively?*

1.5 Research approach

The research questions are addressed through an empirical analysis of a collection of GSA projects between Norwegian customers and Indian suppliers, consisting of two Norwegian and one Indian firm. The research is primarily based on interviews conducted at both the Norwegian and Indian organization at various employment levels, ranging from CEOs to software developers. Secondary sources of data have been collected on the internet, including research on similar issues from different contexts. Company literature has also been used to supplement the research material. The research was conducted in 2004. Table 1.2 profiles the firms studied. To ensure anonymity, the names of the firms used are pseudonyms.

Table 1.2: The involved firms.

Firm	Profile
Arctic	<ul style="list-style-type: none"> • Small sized Norwegian company. • Established in 2001. • Collaborated with Indco, a Hyderabad based firm since 2001.
Norco	<ul style="list-style-type: none"> • Small sized Norwegian company. • Established in 2001. • Preliminary phase with their GSA project with Indco, started in 2003.
Indco	<ul style="list-style-type: none"> • Medium sized company in India. • 10 years experience. • Software development with offshore clients in different countries.

1.6 Expected contributions

The case-analysis seeks to contribute to identifying the cultural challenges that are introduced in Norwegian-Indian GSA relationships, and understand how firms deal with them. The thesis then aims to identify and build awareness of cross-cultural challenges and their management in GSA relationships. Specifically this thesis hopes to make the following theoretical and practical contributions.

1.6.1 Theoretical

- Identify cultural differences between Norwegian and Indian firms.
- Establish general guidelines for GSA relationship building.
- Acquire knowledge on how small firms could counter complexity raised in GSA.

1.6.2 Practical

- Identify local business practices and how they influence the GSA project.
- Identify possible mechanisms for strengthening management practices.
- Identify varying cultural and ethical perspectives on GSA work, and how these can best be managed.

1.7 Outline of this thesis

This chapter has introduced GSA and emphasized the need for research on cultural issues in GSA projects, given the context of Norwegian and Indian relationships. The remainder of the thesis is organized as follows:

Chapter 2 Benefits and challenges of GSA introduces the reader to the benefits and challenges in GSA projects situated within the current context of globalization.

Chapter 3 Theoretical framework presents the theoretical framework for the analysis of this thesis.

Chapter 4 Research approach presents the research methods used for data collection and analysis.

Chapter 5 India and Norway introduces the broader context of this thesis, with a focus on India and Norway.

Chapter 6 The cases presents the three firms, Arctic, Indco and Norco, and their case studies with a focus on the cross-cultural issues.

Chapter 7 Case analyses presents the analysis of the case material based on the theoretical framework developed in chapter 3.

Chapter 8 Conclusion concludes this thesis and presents the findings, and identifies some future research directly relating to Indian-Norwegian GSAs.

Chapter 2 Benefits and challenges of GSA

The previous chapter introduced GSA and discussed different GSA strategies. Furthermore, it presented the research questions addressed in this thesis. This chapter will introduce the benefits and challenges of entering into GSA arrangements. This discussion is situated within the broader context of globalization, so a brief overview of globalization and its impact on GSA is necessary.

2.1 Globalization

Globalization is not a new concept, and has been a part of our everyday life for years. From the food we eat, the clothes we wear, to the cars we drive are all in different ways products of globalization. This section will define the concept of globalization and how GSA is implicated within these contemporary processes.

A common conception of globalization is that it is a process started in the western world, driven by western technology and on western terms. The concept of globalization tends to imply that the world is experienced as one place, homogenous in its social, cultural, political and economic global systems. The words of Ohmae are seen by many to capture this perspective on globalization:

"Today's global economy is genuinely borderless. Information, capital, and innovation flow all over the world at top speed, enabled by technology and fueled by consumers' desires for access to the best and least expensive products" (Ohmae 1995, inside front cover, italics added).

Furthermore, globalization can be described as '...a widening, deepening and speeding up of worldwide interconnectedness in all aspects of contemporary social life, from the cultural to the criminal, the financial to the spiritual' (Held et al., 1999, pp 2). Giddens explains the effects of globalization as; '...larger and larger numbers of people (living) in circumstances in which disembedded institutions, linking local practices with globalized social relations, organize major aspects of their day to day life' (Giddens, 1990).

Software development, as it is developed in a globally diverse context, is fundamentally a product of, and also reflects, contemporary globalization processes. Digital information can be transported with high speed telecom links more cheaply and easily than before (Sahay et al., 2003), allowing for the electronic movement of software work across national borders. This movement is fundamental in allowing software development work to be carried out in GSA.

2.2 Global Software Alliances

There are many reasons why firms choose to outsource part of their business to an external agent, including meeting their economic, political and practical needs (Carmel, 1999). GSA is a software development agreement between two firms from different countries, and is undertaken at geographically separated locations across national boundaries in a coordinated fashion involving real time or asynchronous interaction (Sahay et al., 2003). GSA is a business process that is “a relatively long-term relationship between firms based in different countries to enable software development to be carried out primarily off-shore (in the premises of the firm doing the development)” (Sahay et al., 2003).

Firms use outsourcing suppliers from different parts of the world through focused production facilities to gain a decisive edge in pricing, logistics and time to market (Khan et al., 2002). According to Nicholson and Sahay one of the major reasons for the growth of GSA is because unlike material goods, digital information can be transported cheaply and easily. (Nicholson and Sahay, 2001) Carmel describes three unique factors to characterize GSA: Distance, time and national culture (Carmel, 1999), implying physical distance, time zone variations, and differences in norms, values and/or working methods respectively between the vendor and contractor firm (Ford, 1982). While these factors raise new managerial and organizational challenges, GSA firms can potentially be better managed by building a sound relationship over time. Short term projects are usually not commercially advantageous, as they will not justify the investments required to establish and operate a GSA. Potentially large and complex projects can be undertaken by GSA, but practically they are very challenging to execute effectively.

2.2.1 A historical view of GSA

With respect to outsourcing, the software industry is relatively immature as compared to the traditional manufacturing, which has used sub-contracting as a business strategy for over 50 years. The software industry has grown tremendously in the last 2-3 decades. In 1969, IBM became the first computer company to see the value in launching a separate software unit, where the customer was for the first time charged separately for hardware and software (Narasimhan, 1993, p. 7), and constituted the basis for the creation of what is today recognized as the software industry. Another factor was the PC-revolution of the 1980s that constituted to a change in the culture of software development, which previously had been the domain of large companies. This contributed to the emergence of smaller firms, which changed the way we think about software development (Carmel, 1999).

During the 1960s and 70s, outsourcing was not a flexible activity since most of the work involved service bureau contracts which were difficult to manage overseas. During the 1980s and 90s, offshore outsourcing became easier as large technology suppliers increased their presence overseas, together with management and consultancy firms (Khan et al., 2002). Heeks (1996) notes that Tata Consultancy

Services, (TCS), an Indian firm, in 1974 became the first firm to agree to export software in return for being able to import hardware. The software outsourcing industry moved in giant leaps from the small start when Texas Instruments first launched its software development center in India. In 1985, they set up a subsidiary in Bangalore, for developing Computer-Aided Design (CAD) tools and chip design (Khan et al., 2002). This successful move motivated other companies to go abroad, and from then on India has been the accepted champion of GSA. The demand for software increased, and coupled with the shortage of skilled IT-professionals in the Western world, the demand for outsourcing became more pronounced. The recent economic hardships in the software industry have also accelerated the growth because of increased pressures to find more inexpensive ways to meet the software development needs.

It is estimated that the growth in the GSA industry will continue to escalate in the future. Forrester Research estimates that the demand for offshore outsourcing will account for 28% of IT budgets in Europe and the U.S. in 2004 (Siviy et al., 2004). Further, the number of offshore IT workers worldwide will grow from 360,000 in 2002 to more than 1 million by 2005. There is also expected to be growth in joint ventures. The experience of India as an effective software supplier has developed globally, contributing to growing trust in offshore models. As Indian firms have acquired the highest levels of Capability Maturity Model (CMM) certification, there is a growing shift from outsourcing of legacy systems maintenance and low-level coding towards more complex lifecycle projects, contributing to more firms moving up the value chain (Murali, 2003). These trends have attracted firms from other lower cost countries to also enter the global marketplace. As the cost advantage for India as a software supplier is slowly diminishing, large Indian firms are subcontracting IT work to new, lower-cost software developers in China and Vietnam to stay competitive (Klucs, 2004).

2.3 Benefits and risks in GSA

There are various reasons why firms opt for GSA agreements, often without adequately understanding the associated risk and challenges involved in its management. This section outlines some of the main benefits and risks associated with GSA projects.

2.3.1 Benefits of GSA

Many factors contribute to the decision to choose outsourcing, including two significant issues related to increased access to a skilled workforce, and for reducing development costs (Carmel and Agarwal 2001). In addition to these two key issues, some other motivations are also discussed. This section discusses the two major accelerators, and several minor accelerators for adopting GSA agreements.

Major Drivers

This section discusses the two major accelerators for adopting GSA agreements.

Access to a skilled workforce

In the late 1990's there was a significant lack of qualified IT-personnel in the US and Europe, forcing Western firms to go abroad. As Carmel points out, one of the primary reasons for the explosion in GSAs was the acute shortage of software professionals (Carmel, 1999). This reason still remains an important issue, and is further magnified by the high salaries demanded by qualified IT-workers in the West. A NASSCOM study indicates a rising shortage of working-age population in the US and Europe, 17 and 10 million respectively over the next decade, as contrasted to India having a surplus of 47 million in 2020. Issues of both numbers and costs thus contribute to the predictions in increasing GSA trends.

Furthermore, GSA enables firms to operate with a smaller permanent workforce, which contributes to managing the various variations in the software market. It can help firms to easily scale their workforce up or down according to work demands of projects. A large permanent work force is often seen by top management to be a dead weight for firms in a fluctuating market, which however raises ethical challenges. These are discussed under risks of GSA.

Relative development costs

Firms want to employ highly qualified IT-personnel, but at the same time avoid the high wage structure normally seen in Western firms. In the light of the present economic downturn, a primary motivation for GSA has become cost reduction (Khan et al., 2002, Gopal et al., 2002). Carmel argues that the low costs in emerging countries offer software companies more flexibility to “ramp” production up and down

as their product cycle and customers demand (Carmel 1999). Table 2.1 illustrates the relative wage difference among some of the main countries in the GSA industry.

Table 2.1: Relative wage difference.

Country	Salary ranges for IT roles (US \$)
China	\$ 3,000 to 8,000
India	\$ 5,000 to 12,000
Philippines	\$ 5,000 to 10,000
Russia	\$ 6,000 to 10,000
Ireland	\$ 25,000 to 35,000
Canada	\$ 25,000 to 50,000
United States	\$ 60,000 to 90,000

Source: Deloitte Research, 2003.

GSA projects implemented solely with the aim to reduce costs are not necessarily an easy route to success. Sahay et al., (2003) argues that strategies aimed at obtaining cost savings alone can be disappointing because of the significant hidden management costs, for example related to communication and collaboration.

Minor drivers

This section discusses other minor accelerators for adopting GSA agreements.

Reduced time to market

GSA offers the possibility to develop software around the clock. Given the time-zone differences, it offers companies a possibility to work on a project continuously. Carmel describes this work arrangement as “follow-the-sun” involving the transfer of unfinished work from site to site on a daily or weekly basis as the project demands (Carmel 1999). Given the short time-zone differences between Norway and India (4.5 hours) this option may seem relatively less attractive than for an American/Indian relationship which has 8-12 hours time difference, allowing the Indians to pick up the work when the Americans finish their work day, and the process is reversed when the Indians’ workday is over. This “extension” of the working day is argued to contribute to the overall reduction of development time to market.

Focus on core business

It is difficult for firms to excel in every aspect of the business cycle. According to Heckman, a company must maintain various types of technological expertise to preserve its competitive abilities. However, doing everything internally is no longer a feasible solution as rapid technological advances occur on many fronts simultaneously (Heckman, 1999). To outsource peripheral activities in the firm’s business cycle, the firm can potentially increase the focus on their core businesses and thus raise the

competence level in that domain, while allowing managers to refocus on their core activities (Aubert and Roy, 2002). External acquisition of technological development is also likely to lead to shorter time as compared to development in-house (Kyrki 2003). If an organization does not have enough experience in a given area of IT, they might find it advantageous to outsource such areas to firms with that expertise. Cash suggests considering project size, experience with the technology and project structure in determining whether the development of a system should be outsourced or not (Cash et al., 1992).

Quality

Perceived quality of the outsourcing firms is another important determinant of outsourcing. For example, a major aspect of India's success has been due to the high demands by their firms to become certified, with ISO or CMM, The Capability Maturity Model for Software (also known as the CMM and SW-CMM) has been a model used by many organizations to identify best practices useful in helping them increase the maturity of their processes (Software Engineering Institute). As of 2002, 48 Indian companies have achieved the CMM level 5 certification (NASSCOM), which is the highest number of certified firms in the world. In the table below, the certification levels of listed Indian software firms are summarized.

Table 2.2: Indian CMM companies.

SEI Quality Assessment	Number of firms
SEI CMMI	5
SEI CMM Level 5	46
SEI CMM Level 4	38
SEI CMM Level 3	34
SEI CMM Level 2	16
PCMM Level 5	2
PCMM Level 4	2
PCMM Level 3	6
PCMM Level 2	12

Source: NASSCOM, 2003

Ethical benefits

Ethics provides us with a set of guidelines on how we should act under different circumstances in order to achieve good and fair conditions. An ethical argument for outsourcing is the potential influence it has for creating and improving jobs and the standard of living in relatively poorer countries. However, such arguments are rarely acceptable in firms driven primary by cost considerations. Also sending software work abroad can potentially enrich jobs domestically, and create different kinds of jobs. These arguments are however contentious.

2.3.2 Risks in GSA

GSA projects are faced with many risks compared to in-house projects or within country development. These risks put strain on management of the involved firms', but can be mitigated by good business practices and management procedures. This section discusses some of the key risks.

Uncertainties of Communication

Communication presents a major challenge, and has impeded many GSA projects (McCaffrey, 1998). As cultural differences introduce new skill demands on IT-workers (Laage-Hellman 1997), they affect how the two sides perceive each other, and create a source of misunderstandings. Cultural differences are often the root of communication challenges (Sahay et al., 2003), and lack of awareness of them is a key risk experienced in GSA projects.

The geographical distance between firms exacerbates the uncertainties experienced in the communication process. Distance implies a loss of informal and face-to-face communication which can not easily be replicated through ICTs, a problem also noted in within country and in-house development (Carmel 1999, p XIV). Constraints include the loss of small dialogue by the coffee machine, observation of body language, facial expressions, and other forms of non-verbal communication. Conditions to deal with uncertainties and risks of communications in co-located settings are often not available in GSA's. A good communication process needs familiarization between the two partners, often best achieved in face-to-face settings, which also contributes to creating a social bonding. However, providing face-to-face contact adds significantly to project costs.

People not sharing the same cultural background don't always understand the intentions of the other side. This decreases predictability, often emphasized by the use of ICTs like E-mails, discussion forums and telephone, and further magnified if the infrastructure is of a poor and unreliable quality. Lack of maturity of technology considerably increases the risk of project failure. The use of vendors that have experience with the selected technology helps to reduce the risk (Akmanligil, 2000). While travel cost can potentially be reduced by using video conferencing as a collaboration tool, it does not add the same level of depth and personal touch as face-to-face contact. Communication in GSA requires a quality technical infrastructure, which over the years is being made available at lower costs. However, access and quality is not equally distributed in different countries in the world.

Despite these improvements, electronically transferred communication does not equate to the richness of personal interaction, and places demands on the sender to communicate more detailed and structured information than in co-located settings. A brief summary of most commonly used communication mediums are listed below in table 2.3. It describes the capability of the different communication mediums.

Table 2.3: Relative Trait Saliency of Selected Media.

	Synch/ Asynch	Richness	Feedback	Social Presence	Symbol Variety	Rehearsability	Reprocessability
Videoconference	Synch	High	Medium-High	High	Low-High	Low	Low
Telephone	Synch	Medium	Medium	Medium	Low	Low	Low
Electronic phone ("Chat")	Synch	Low	Medium	Low	Low-Medium	Low-Medium	Low-Medium
Electronic mail	Asynch	Low	Low-Medium	Low	Low-High	High	High
Groupware	Asynch	Low	Low	Low	Low-High	High	High

Source: Adapted from Dennis, A.R., and Valacich, J.S, 1999

Unexpected and hidden costs

GSA is often initiated as a miracle cure with quick rewards, and dramatic cost reductions. According to Heeks et al. (2001), successful offshore outsourcing is based on having realistic expectations of what can be achieved. The need for solid contracts and substantial managerial efforts are important, and can not be “swept under the carpet”. Issues included are estimation and planning of a GSA project.

Unexpected costs may arise if the estimation is inaccurate, which is often the case in GSA projects. If the selection of the GSA partner is based purely on cost savings, managers often find themselves at the short end of the stick. Often firms underestimate to gain contracts, subsequently leading to cost and time overruns. Hidden costs include consultancy-fees, transfer of software license fees, travel and communication costs, and loss of data, which may potentially cancel the cost advantages of offshore outsourcing (Khan, 2002). Poor planning of details contribute to costs not being identified, and reduces learning from past mistakes (Lonsdale and Cox, 1997). Decision-making in a cross-cultural and unpredictable complex environment, require greater, rather than lesser attention to planning.

A survey by the Gartner group has shown that only 1 out of 5 firms that opt for GSA agreements achieve significant cost reductions, as the management cost are underestimated, which average 4.5-15% of the total contract value. However 21% of the firms questioned did in fact report cost reductions of 20 % or more (Aftenposten, 2003, page 13). Success often remains elusive and IT failures remain a serious problem (Sauer, 1999), and 40% of all corporate IT projects are abandoned before completion (Griffith et al., 1999). Unused or underused systems cost business millions of dollars each year (Wong, 2004). But applied properly, GSA's seems to offer significant potential for cost reductions.

Political environment

GSAs by their very nature have political implications, for example in the elections campaigns the US and UK; outsourcing has featured as a major agenda item in the debate because of its implications on employment and national economic growth. Frequent changes in the political structure in the outsourcing countries, for example

the recent government change in India, may sometimes discourage foreign investors. The recent election results in India rattled the stock market, as it was unclear how the new government would support the IT industry. Furthermore, fears of strikes or power cuts also raise the level of uncertainty and risks (Khan et al., 2002).

Attrition

Attrition brings in various risks in GSA, as the loss of vital team members can be devastating for the project as a whole due to lost knowledge. Several methods are being used by outsourcing firms in order to minimize the effect of attrition. Some companies try to inculcate a strong sense of local identity to help motivate staff, implement shadowing and buffering methods (to develop backup staff for running GSA projects), and provide training and further improvement of employee skills. Motivating and retaining staff requires sensitivity to social, organizational and technical networks that the actors are situated in, including competition from other firms, family responsibilities, attitudes to hierarchy, religion and community (Sahay et al., 2003). Management practices need to be sensitive to employee quality-of-life issues, such as choice of assignments and locations, working hours, and training. Several tactics are used to retain employees including providing free or subsidized housing, stock options, and opportunities to work abroad, free or subsidized meals, assistance in buying cars, houses and free transportation (Embar, 2001). However, the effectiveness of these tactics is contingent upon global conditions of the labor market.

Ethical risks

Ethical values are culture or country dependent, with the result that what is correct in one culture could be wrong for another (Siponen and Kajava, 2000), including ethical concerns. This creates an environment where actions are more easily misinterpreted across partners. The perception of actions is often rooted in cultural norms and environment not easily distinguished by outsiders.

Another ethical challenge, from the contractor's perspective, is in sending jobs abroad, which raise concerns and unrest about local job losses. For firms only focused on cost savings, and seeing GSA as a method to minimizing the internal workforce, it can create unrest and jealousy among the employees, who are afraid of losing their jobs and forced to train their much cheaper counterparts (Ebert and De Neve, 2001). However, for firms to do outsourcing without discharging their own employees requires significant efforts in educating, building awareness, and investing in retraining and relocating staff.

This section has discussed the various potential benefits and risks of GSA teams and lays the groundwork for a theoretical discussion of culture which is seen as both a significant challenge and opportunity in the case of GSA's. Table 2.4 summarizes the benefits and risks of GSA.

Table 2.4: Benefits and risks in GSA.

Benefits	Risk
Access to a skilled workforce GSA enables access to large and skilled workforce. Can help counter the labor shortage in Western countries.	Communication challenges Distance, ICTs and cultural differences introduce the actors to communication challenges that can impede the partnership.
Development costs Gain strategic advantages through lower wages and overall development costs from GSA actors like India.	Hidden costs Increased costs can arise from GSA's due to poor planning, contractual issues, selection of GSA partner and increased efforts on managerial issues. This can defeat the original cost advantage.
Time to market Enables more development time from the time differences between the GSA partners. For instance an American/Indian partnership has an 8-12 hours time difference.	Political environment Changes in the political environment, both in development countries and the western world, raise uncertainties about the future of GSA.
Focus on core business Firms can concentrate on core activities. Areas outside can be covered by a GSA partner.	Attrition Attrition threatens to create uncertainties and instability in the long term prospect of GSA projects.
Quality The quality and competence are increasing among the GSA suppliers.	Ethical challenges Raise concerns about local job losses, can create unrest and instability at firms. Put strains on managerial efforts to minimize this challenge.

2.4 Summary chapter 2

This chapter has presented a brief overview of globalization, and how GSA's are implicated in them. Furthermore, it has presented some of the important benefits and risks associated with GSA's. In the following chapter 3, the theoretical framework guiding the thesis is presented.

Chapter 3 Theoretical framework

3.1 Introduction

This chapter will introduce the theoretical framework adopted in this thesis for analyzing cultural issues in GSAs. This framework helps to understand why people act as they do in social interactions within culturally diverse environments and analyze potential sources of misunderstanding between culturally differentiated actors. This framework draws on the works of British social theorist Anthony Giddens, particularly Structuration theory, and its application in Information Systems (IS). Giddens has developed a wide-angled approach which seeks to synthesize micro and macro sociologies (Layder, 1994). To develop an integrated framework (Craib, 1992), Structuration Theory offers a set of ‘sensitizing’ concepts to be applied in social analysis (Walsham 2001, Layder, 1994). Over the past decade, IS researchers have developed Structuration models of technology which offer new insights into IT-enabled organizational change, by looking “beneath the surface” of technology’s role in organizational change and the shifting layers of meaning that arise (Wong, 2004, DeSanctis and Poole, 1994). The framework so developed will help the analysis of the Norwegian-Indian GSA case, in the final chapter.

This chapter consists of a presentation of Structuration theory and its key concepts, a discussion of local culture and how it applies to the theoretical framework. Finally, I discuss the use of Structuration theory for the analytical purposes of this thesis.

3.2 Structuration theory: Key concepts

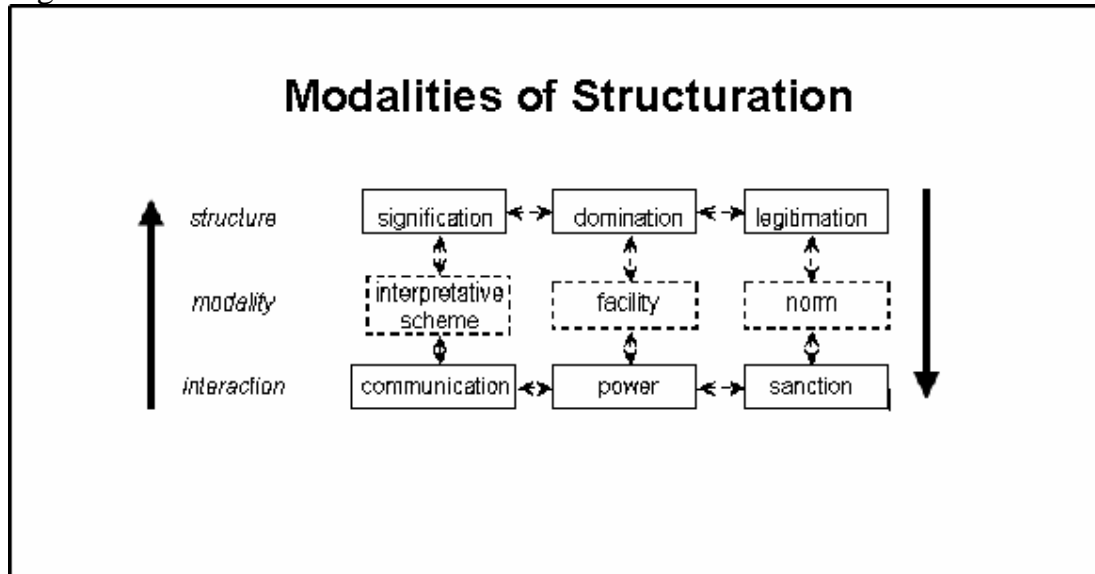
Some key concepts of Structuration Theory and how it applies to this analysis are now presented briefly.

Structuration theory aims to explain the relationship between structure and action in social systems (Orlikowski and Robey, 1991). Giddens defines ‘structure’ as rules and resources that actors draw upon as they produce and reproduce social practices (Layder, 1994). Giddens emphasizes the process of reflexivity and capability of human actions in the structuration process, providing a ‘way of seeing’ social practice (Orlikowski and Robey, 1991).

Structure refers to “structural properties...which make it possible for discernible similar social practices to exist across varying spans of time and space and which lend them ‘systemic’ form”(Wallace and Wolf, 1999, pp 344, Giddens, 1984, pp 17). Structure consists of rules, which are seen as cultural mechanisms that help organize action, and lead to the creation of patterns and their stabilization across time and space (Rose, 1998, Giddens, 1984). Thus, structure refers to rules of behavior and the ability of actors to deploy resources that exist in the human mind, rather than being seen as external constraints (Walsham, 2001) of “forces of nature.” Structural constraints do not operate independently from the motives and reasons that agents have of what they do (Giddens, 1984, pp 84).

Giddens key concepts from Structuration theory include *interpretative schemes*, *resources* and *norms*. Interpretative schemes are described as standardized, shared stocks of knowledge that humans draw on to interpret behavior and events. Resources are means through which their intentions are realized, goals are accomplished, and power is exercised. Norms are the rules governing sanctioned or appropriate conduct, and they define the legitimacy of interaction within a setting's moral order (Olesen and Myers, 1999, Orlikowski and Robey, 1991, p. 148). The process of structuration occurs as a result of the interaction of the three modalities with human actors and structures (Olesen and Myers, 1999). The figure on the next page illustrates how Giddens visualizes the relationship between interaction, modality and structure.

Figure 3.1: Modalities of Structuration.



Source: (Olesen and Myers, 1999).

Giddens argues that the interaction between the three modalities is interconnected and is only separated for analytical purposes. Things that people do at the interaction level mutually affect the modalities, resulting in more broadly shared structures, and over time these structures may take the form of institutionalized practices (Olesen and Myers, 1999).

Notions of space, place and time are central to Structuration theory in the analysis of social conduct. In pre-modern societies, space and place largely coincided, since localized activities occurred in particular places. Daily social life was mainly conducted on a face-to-face basis, and the presence of others was a major source of information utilized in the production of social encounters (Giddens, 1979).

With increased complexity of modern societies, large areas of social life became institutionalized and centralized, adding new dimensions to social existence. *“Not only do people interact on a face-to-face daily basis, but they are influenced by much more diffuse social relations (class, ethnic, governmental, economic) which stretch away in time and space”* (Layder, 1994, pp 136-37). With modernity, space is separated from place, by fostering relationships between absent others rather than through face-to-face interaction (Giddens 1991, pp 18). Place and space reflect distinct meanings and identification of people to location (Sarker and Sahay, 2004).

Space serve as containers for places whose meanings are shaped by what one does in them (Sarker and Sahay, 2004; Curry, 1999). Space is usually experienced through distant and standardized symbols with little locally inherent meaning (Sarker and Sahay, 2004).

Space is seen to be constraints to place, which is best conceptualized by the idea of locale, which refers to the physical settings of social activity as situated geographically

and with existential signification. Furthermore, place represents psychologically meaningful domains (Goodkin, 1980) grounding identifications through a personal and intimate sharing of experiences (Sarker and Sahay, 2004). As social practices become reasonably stable over time and space, they lead to the creation of routines in which actors habitually engage. Routines constitute ‘the habitual, taken-for-granted character of the vast bulk of the activities of day-to-day social life’ (Rose 1998, Giddens 1984, pp 376). As social practices extend through space and time; the better established they become, and the more likely to be thought of as institutionalized features of social life (Rose 1998).

Giddens argues that the “contemporary world system is, for the first time in human history one in which absence in space no longer hinders system co-ordination” (Wolf and Wallace, 1991, pp345, Giddens, 1984, pp 185). A reason for this is the development of communication forms, such as ICT. The use of ICT in contemporary work settings can create tension with existing established practices based on face-to-face routines. Robertson has argued that time and space compression facilitated by ICT, is one key driver in the exacerbation of collisions between global, societal and communal attitudes (Walsham, 2001, Robertson, 1992).

Walsham (2001) emphasizes the role of conflict and contradiction in analyzing a cross-cultural relationship. While conflicts refer to actual struggle between actors and groups, contradiction is a structural concept, and together they express the main ‘fault lines’ of societal systems (Walsham, 2001, Giddens 1984, p.198). Cultural differences constitute these ‘fault lines’ and structural contradictions within and between social groups (Walsham, 2001). People are intrinsically involved with society, and they construct, support and change it because they are affected by, and affect, their social environment (Layder, 1994).

In the following section, I discuss the application of Structuration theory in the cultural analysis of GSA.

3.3 Structuration theory as a lens for cultural analysis of GSAs

This section will illuminate the term culture and why it plays an important role in GSAs. Furthermore, I discuss why Structuration theory provides a useful lens to analyze cultural issues within this context.

3.3.1 Culture

To unravel the complexity of culture, we need to have a broader understanding of it. Culture is a term that everyone thinks they understand and it has become a potent aspect of identity (Westrup et al., 2002). A traditional view of culture is that it provides members with images of their basic concerns, principles, ethics, bodies of manners, rituals, ideologies, strategies, and tactics of self-surviving, including certain notions of good deeds and bad, various forms of folklore and legends. The way we give meaning to the world begins at birth with gestures, words, voice, noise, colors, smells, and body contact we experience. Our culture is what is familiar, recognizable, and habitual. It is ‘what goes without saying’ (Carmel, 1999, Van Mannen, 1993), and based on basic values and assumptions concerning communication and understanding among social groups. According to Walsham (2001) culture can be conceptualized as shared views in a social collectivity such as a country or an organization, each with a complex structure in their mind, not fully shared (Walsham 2001). This implies that systems, power relations and behavioral norms are not merely in the mind of one person, but they also reflect structural properties or ‘systemness’ of shared values (Walsham, 2001).

Follesdal (1998) considers culture to be rule-regulated patterns of behavior representing social practices by which people conduct themselves in accordance to public rules, etiquette, norms or rules expressed in law. These rules are not merely descriptions, but a cultural “rule set” that has a direct normative impact on our action, as we act on them, generally abide by them, and often take them for granted (Follesdal, 1998). Similarly Hofstede (1980) has defined culture as the mental programming of the human mind, which shapes our behavior from the day we are born, and our thinking, imaging and behavior. Cultural factors shape the way in which societies conceive their own futures and choose the means to attain these futures (Follesdal, 1998).

Researchers have argued that people tend to share assumptions, knowledge, and expectations with others they have close working relationships to (Orlikowski and Gash, 1994). Likewise, social interaction and negotiation over time create opportunities for the development and exchange of similar points of view (Orlikowski and Gash, 1994). In our case, GSAs provide a unique arena for such exchanges to take place, given the varying ‘systemness’ of the cultures the actors come from and the different ‘structures’ in their mind, the potential for creating shared understanding is often underestimated. Sahay points out that *“It is difficult to find a set of rules that are universal, due to the complexity of cultures”* (Sahay et al., 2003). Making

collaboration in GSA a complex process, and cultural differences can act as a veil between the two sites. The participants need to render the veil to interpret correctly and ensure that communication processes are understood. This is challenging due to the global nature of GSAs and its use of ICT across cultural dimensions, time and space, as we do not share the same framework and references for behaviors and norms.

“All social actors know a great deal about what they are doing in the processes of interaction; and yet at the same time there is a great deal which they do not know about the conditions and consequences of their activities, but which nonetheless influences their course” (Giddens, 1979, pp 215). When people interact, they automatically draw upon resources which they have experienced, either in formal settings (for example education), or through informal means (for example via friends and family.) These resources can generally be thought of as interactional skills, in that people regularly employ them in their routine dealings with others (Layder, 1994, pp 133). We use these skills in our day-to-day social life, and they shape our structures of behavior.

GSA partners are products of different social cultures, and their understandings and actions are shaped by their respective cultural contexts, thus affecting the relationship. Placing GSA within the context of globalization emphasize the need for managers to acknowledge the extreme complexity and turbulence of the context in which they operate. Changes and surprises in the relationship are the norm rather than the exception (Sahay et al, 2003), and increases with complexity in GSA projects. When requirements are harder to capture, the relationships needs a tighter collaboration to transfer the necessary knowledge within the project, the project itself might change over time, and consequently flexibility is needed in both organizations. Sahay (2003) states that varying contextual conditions can shape relationships differently and there are no set of universal guidelines. Methods that worked well for one GSA project might prove unsuccessful for others (Sahay et al, 2003). However, given flexibility and managerial awareness in the firms, GSAs can mature and become stable over time.

The GSA environment compels actors to cooperate and learn from an actor from a different culture. This can raise challenges for the actors until the experience is routinized and an embedded part of the GSA actor’s social environment. However, our unique personalities, styles of behavior and the experiences they reflect (as well as our moment-to-moment feelings and emotional responses) tend to imbue our actions with a distinctive flavor. We act ‘creatively’ in this sense by bringing to bear our unique characteristic upon socially shared knowledge (Layder, 1994, pp 133-134).

“The presence of others is a major source of information utilized in the production of social encounters” (Giddens, 1979, italic added).

Norms of behavior vary widely between cultures (Walsham, 2001). A difference in expected behavior, and norms between GSA teams decrease predictability of actions, thus creating challenges for GSAs. Giddens argues that there can be no universal ‘laws’ of social life, as human behavior cannot be predicted with the precision which

is possible in the natural science because it varies according to people's intentions, objectives and the historically changing meanings which give them the sense and context. Social practice is based on the individuals own knowledge and interpretation and if it is possible to make any generalizations at all about social life then they will be limited to particular times, places and circumstances (Layder, 1994, pp 129).

3.3.2 Dealing with culture

Cultural differences contribute to misunderstandings in the way people interact with each other (Akmanligil, 2000). We often assume that our own culture and communication processes are superior, and frequently assume that the other actor should act like we would under similar circumstances. This assumption often leads to conflicts and contradictions, and contributes to the cultural gap between firms. Westrup argues that each culture is to be respected, examined, and described as part of diversity which humans have developed as ways of living. Therefore actors should take a humble and tolerant approach to GSAs in terms of understanding cultural differences.

Researchers have criticized the lack of empirical foundation and the generalizations characterizing Structuration theory (Rose, 1998). It offers a conceptual mechanism for explaining the reproduction of social structure, but Archer argues that this is not the crucial question. The question is: why do some forms of social reproduction succeed and become institutionalized and others do not (Archer, 1996). For instance, why does one Information System takes its place successfully in organizational life, and another not? For this question, Structuration theory has no direct answers (Rose, 1998).

An alternative theory analyzing culture in the modern world is Hofstede's model on representation of culture, which has been used in IS research to understand how different cultures can affect relationships. Hofstede's work has been influential in linking nations to cultural identities and with his findings, a cultural context can be generated which appears to be static and unconditioned (Westrup et al., 2002).

Structuration theory on the other hand offers few clues as to how to proceed in the everyday world in the gathering of useful understanding, and its reflection back into the world of practice (Rose, 1998), as it can lack concrete empirical examples. However, Hofstede's classification of national cultures has been criticized as it promotes a static formulation of culture, treating it as a causal agent while ignoring how national cultures are constituted and maintained (Westrup et al., 2002). It seeks to use national culture as an *explanation* for say, variation in attitudes to ICTs, rather than to seek the mechanisms by which these attitudes are expressed and reformulated. Williamson (2002) disqualifies this framework and advises not to use it in research. As Hofstede studied IBM employees around the world, he may have been too ambitious in seeking to explain one country's culture based on a single organization. Lastly, for recent research projects, the values of the different indices and cultural constructs developed by Hofstede over two decades ago would have changed (Navarrete & Pick 2003).

3.4 GSA: A theoretical framework

This section illuminates how Structuration theory can be utilized when analyzing the cultural impact in GSA projects. I will apply structuration theory to the analysis of GSAs, discussed in light of the earlier introduced terms of structure, place, space and time, culture, conflict and contradictions.

3.4.1 Structure

“The structural properties of a societal system exist only in so far as forms of social conduct are reproduced chronically across time and space” (Giddens, 1984, pp Xxi and Xxiii, italic added).

Action and structures are connected as actors go through a socialization process and become dependent of the existing structures, and at the same time structures are shaped by their actions, as in the context of GSA, where actors cultural background shape the GSA structure, and are shaped by their action, in the cross-cultural context of a GSA.

Structures can be seen as rules, and continuance of actions shape structures and structure shape the actions, implying a non-static relationship, and rather an ever-changing one over time. Culture can be conceptualized as shared views in a social structure, and structure can over time be reflected in GSAs, and these emerging patterns can appear in a mature GSA, which enables more complex tasks because of shared, familiar structure.

Giddens emphasizes the way human beings reflexively monitor their own actions, that of others, and consequences that arise, both intended and unintended. The latter provides an example of the basis for social change as well as social stability. If a human being takes action and he/she subsequently views the unintended consequences as negative, then it is likely that different action will be taken in similar circumstances in the future, with related changed structure in the mind (Walsham, 2001).

Another aspect of structures in GSA is power. Power is defined as the capability of actors to secure outcomes where the realization of these outcomes depends upon the agency of others (Layder, 1994). Power shapes and influences the relationship, and to analyze the balance of power in the GSA relationship, where the power location can be diffuse and equilibrium in power is hard to achieve, due to its ever-changing nature.

I will examine how structure and action shape the relationship and its effect on work patterns, methods, and organizational change in order to develop more efficient structures to support collaboration.

3.4.2 Conflict and contradictions

Cultural challenges often provoke conflicts and contradiction, mostly due to misunderstandings. Such challenges are often more prominent in complex and innovative GSAs, as this research is based on. Identifying such challenges and how they affect and are affected by the complexity and increasing maturity in GSAs can prove helpful for solving future management challenges. Issues arising include language, mindset and communication among some. The first issue is described in detail below.

The thesis identifies how language differences have affected the GSAs' and if any mechanisms can be used to minimize the potential conflicts and contradictions raised. Language differences are an important source of cultural differences in GSA's. Software developers from different cultures exhibit different behaviors, norms, and assumptions. Even though the *lingua franca* of the computing world is unequivocally English (Carmel, 1999), a major part of the communication is non-verbal. According to Carmel, as much as 80% of communication consists of contextual information as well as nonverbal cues. The nonverbal part is especially difficult because it is much more reliant on culture. Nonverbal cues are difficult to convey across ("non-rich") electronic communication channels (Carmel, 1999). Different first languages spoken by employees of different countries increase the likelihood of misunderstandings among members of the development team(s) (Cash et al. 1992).

Misunderstandings are not limited to languages differences, but also due to different meanings based on the use of tone. Differences in prosodic conventions between British English and Indian English can create challenges. What sounds to British ears like a statement where a question would be appropriate, and hence is perceived as unfriendly, can be meant as an offer in Indian English (Gumperz, 1982). Forms of expression vary quite a bit depending on the culture. Misunderstandings and cross-cultural gaffes can be problematic. Indian staff speaks English, however they may not convey the same meaning as Western IT workers would imply with the same use of language. An example is a sales executive from an Indian firm doing business in Germany, who told the client, "This relationship is critical to us." The Indian was a bit taken aback when the customer was badly offended, the reason was that "critical" implied "criticize" (Rani, 2002). Moreover, what's considered ordinary politeness in India may seem long-winded to a time-focused American (Danziger, 2000). This research should uncover such challenges.

3.4.3 Place, space and Time

Place, space and time are influential factors in GSAs. The stretching of time and space issues experienced in GSAs is influenced by social factors, such as class, ethnicity and governments, shaping some of the cultural differences. Sahay argues that social and human issues in GSA are magnified because of the increased diversity of people, practices and technology involved (Sahay et al., 2003). The social and human issues can arise from cross-cultural differences, software development issues and individual

dispositions. The distance and time difference cause the organization to be not easily delineated in space and time terms. GSAs' stretch in space and time as employees are often physically separate from each other. Table 3.3 list some challenges raised for GSAs' by space, place and time.

Table 3.3: Challenges of place, space and time.

Factor	Challenges
Place	<ul style="list-style-type: none"> • Limited human connection. • Lack of agreed upon norms of virtual presence and turn-taking. • Invisibility of remote team-member's physical actions. • Mismatch in practices specific to cultures rooted in places. • Incompability in system development knowledge and skills.
Time	<ul style="list-style-type: none"> • Mismatches in psychological and social clocks of team members. • Complexity in accounting for time zones. • Negative interpretations of time lapses. • Difficulty in comprehending temporally disordered sequences of chat and threaded messages.

Source: Adaptation from Sarker and Sahay, 2004.

ICT is widely used in collaboration in GSAs, and can be incorporated into cultural networks to enhance, stabilize or consciously change accepted cultural characteristics, creating a dynamic and complicated relationship between ICTs and different cultures (Westrup et al., 2002). The use of ICTs to enable interaction between people separated in time and space both raises the potential of developing shared understanding and also creating new differences because of how humans relate to technology and the varying social and historical contexts in which technology is used. Walsham argues that collaboration with ICT across different cultures can be problematic, since when a technology is integrated into an 'alien' cultural context, its value may not be perceived similarly as the intent of the sender (Walsham, 2001). There will be different views of the relevance, applicability and the value of particular modes of working and using ICT.

Cross-cultural GSA teams are likely to confront issues of incongruence of values and attitudes (Walsham 2001), which are important aspects of culture, determining what is considered a rational action for both. Two persons, given the same skills, the same objectives and values, the same knowledge and inclination, can rationally decide only upon the same course of action (Simon, 1976), leading to the necessity of building a shared context that will enable a higher level of predictability for the actors in GSA.

Investing in advanced technologies may not necessarily result in improved communication between employees (Malhotra, 1997), as they have varying interpretations of a technology, which is critical in shaping how they interact with it (Orlikowski and Gash, 1994). To interact with technology, people have to make sense of it, and through this process they develop particular assumptions, expectations, and knowledge of the technology, which then serve to shape subsequent actions. These taken-for-granted assumptions are rarely brought to the surface and reflected on, and still remain significant in influencing how humans think and act. People act on the basis of their interpretations of the world, and in so doing enact particular social realities and endow them with meaning (Orlikowski and Gash, 1994), creating the diversity of GSAs.

Leading authors points out that in close working relationships, people are able to share assumptions, knowledge, and expectations effectively with each other. Maturation of GSAs enable better conditions for sharing knowledge across time and place. However, the lack of physical presences forces the actors to rely on ICT as means of collaboration, and ICTs often introduce their own challenges.

3.5 Summary chapter 3

This chapter has presented the theoretical framework and references that will be applied in the analysis. It has presented how Giddens' work can be useful when analyzing cross-cultural collaboration, by illuminating the concept of structures, time and space and cultures, which shapes our behavior in our modern society and are challenging issues in GSA.

The framework has emphasized the role of culture and how concepts from Structuration theory can be applied to describe and understand cross-cultural collaboration, thus hoping to make GSAs more transparent for the reader.

The following chapter will present the methodology used in gathering the data material for the analysis in this thesis.

Chapter 4 Research approach

This section presents and examines the methods used when gathering and analyzing the data from the field work. The interpretive research approach was chosen since the focus of the research was to better understand social and cultural phenomenon in the context of Norway and India.

4.1 The interpretive approach

Interpretive research has emerged as an important trend in IS research, with researchers increasingly adopting empirical approaches which focus particularly on understanding human interpretation and interactions (Walsham, 1995). This approach tries to understand phenomenon through the meanings that people assign to them, as in a GSA context whereby GSA influences and is influenced by the context (Myers and Avison, 2002). Interpretive research assumes that people create and associate their subjective and inter-subjective meanings as they interact with the world around them (Olikowski and Baroudi, 1991). Interpretive research does not predefine dependent and independent variables, but focuses on the complexity of human sense making as the situation emerges (Kaplan and Maxwell, 1994). It attempts to understand phenomena through the meanings that people assign to them (Orlikowski and Baroudi, 1991), by filtering them through their own conceptual apparatus, and giving a version of events back to others (Myers and Avison, 2002).

Interpretive research is not about reporting “facts”, but is about reporting interpretations of individuals, in other words perceptions and/or attitudes (Klein and Myers, 1999). Geertz gives a concise view of the status of the data which are collected in an “anthropological” study. “What we call our data are really our own constructions of other people's constructions of what they and their companions are up to” (Geertz, 1993 p. 9). This challenge is further magnified in conducting cross-cultural research as access problems and the risk of producing ethnocentric (culturally biased) findings (Khan et al., 2002).

The primary aim of interpretive research is to understand how members of a social group, through their participation in social processes, enact their particular realities and endow them with meaning, and to show how these meanings, beliefs and intentions of the members help to constitute their social action. The interpretive perspective attempts to understand the inter-subjective meanings embedded in social life and hence to explain why people act the way they do so (Myers and Avison, 2002).

4.1.1 Why a qualitative method

The interpretive approach typically employs qualitative methods although this does not need to be exclusive. While an interpretive project need not be exclusively based on qualitative research, positivist and critical approaches can also draw upon qualitative methods (Klein and Myers, 1999). Figure 4.1 indicates the multiplicity of application of qualitative research.

Figure 4.1: Three perspectives of Qualitative Research.

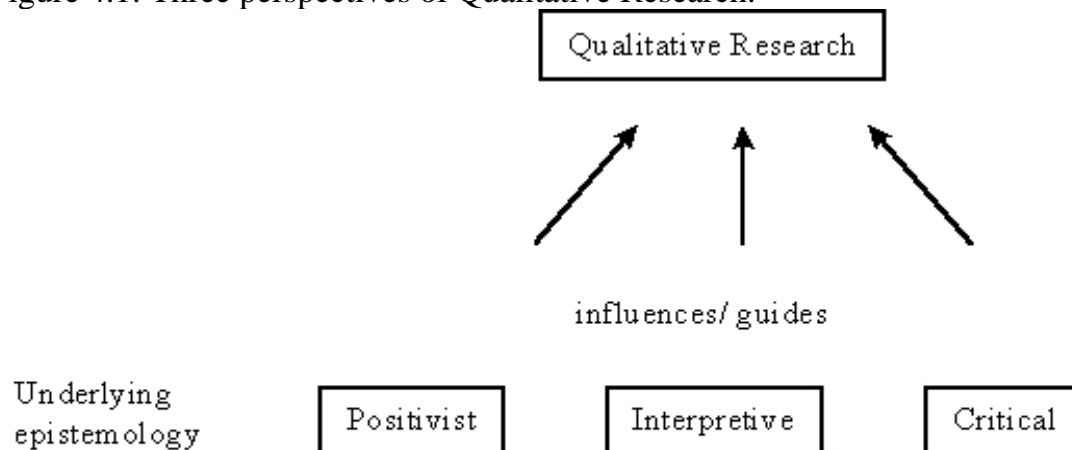


Figure 1. Underlying philosophical assumptions

Source: (Myers and Avison, 2002).

Qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomena. They are designed to help us understand people and the social and cultural contexts within which they live (Myers and Avison, 2002). There are several recognized ways to do fieldwork, but there are as many approaches as there are scientists. Qualitative methods were chosen in this thesis because quantitative methods tend to be narrow and rigid to fully absorb differentiated experiences and attitudes of human beings, especially related to understanding issues such as culture. The vehicle for such "interpretive" investigation is often a field case study, as this examines humans in their social settings (Myers and Avison, 2002,). This form of in-depth case study often involves frequent visits to the field site over an extended period of time (Myers and Avison, 2002).

One thing which distinguishes humans from the natural world is their ability to talk, and qualitative research methods are designed to help researchers understand people and the social and cultural contexts within which they live. Kaplan and Maxwell (1984) argue that the goal of understanding a phenomenon from the point of view of the participants and its particular social and institutional context is largely lost when textual data are quantified (Myers and Avison, 2002).

4.1.2 Role of the researcher

It is important that an interpretive researcher has a view of his/her own role while conducting fieldwork (Myers and Avison, 2002). The researcher's own role can shape the respondent's opinion of him/her and can affect the responses including issues of the researcher's age, nationality, gender, closeness and presumed expertise. Walsham (1995) identifies two roles of the researcher within interpretive approach:

- The outside observer
- The involved researcher

The advantage of being an outsider is that the participants may be more honest because the researcher is seen to have little personal interest and attachment. Possible disadvantages include that information may be hard to reach due to this gap, since the researcher is not part of the everyday activities of the participants. The advantage of being an involved researcher is the possibility of getting access to more information, including sensitive data. Disadvantages arise from the risk of being too close and maybe perceived to be acting in a consultancy role. Whether the researcher participates as an outsider or involved researcher depends on the field of study and available access. The advantages and disadvantages of both approaches need to be carefully considered and evaluated within the constraints of the situation, including issues of access and availability.

4.2 Research design

The research is based on multiple cases, presented in chapter 6. The aim was to shed some light on the different approaches and opinions towards GSAs. Multiple cases was chosen because I was unable to follow a project over time, and multiple cases could give more material to compare different phases, more opinions from the respondents and how different approaches towards GSA reflect cultural issues. However, most of the analysis is based on the Artic-Indco case, as it reflects both sides of GSA collaboration.

4.2.1 Research sites

The Indian firm, Indco, was selected with the help of my supervisor. I attempted firstly to gain access personally or through friends who knew Norwegian firms involved with GSA. Numerous E-mails were sent, but they were typically not acknowledged or communication was discontinued after a few mail exchanges were I explained my thesis intent. After the initial contact was established with Indco, they gave me access to two Norwegian firms they currently collaborated with. However, only one of them, Arctic, accepted to collaborate on this research. Norco, the other Norwegian firm studied, was located through a personal friend of the researcher.

It is interesting that both Arctic and Norco were small sized and involved in projects for building complex data solutions. Furthermore, Arctic was at a more mature stage in their project as compared to Norco, who was in the initial stages of their GSA collaboration. This difference helped provide data on how the expectations, maturity and cultural issues evolve during the course of a GSA relationship.

4.2.2 Norway

Mixes of interviewing methods were used, including telephone, face-to-face and by E-mails. The interviews were conducted at the top management level, due to availability of respondents and the small size of the firms. The respondents selected were those mostly involved with the global software work and thus seen to have experience in dealing with cultural issues.

Based on the limited knowledge I had on how Norwegian firms regarded cultural aspects of GSA, the initial interviews were used to get a feel for the issues deemed important by the Norwegian firms. This then helped to build a foundation for more extensive interviews in both Norway and India.

4.2.3 India

One Indian firm, Indco, was visited, but due to time constraints I was not able to travel to the firm that Norco collaborated with, which was located in a different city from Indco's location.

I was anxious when I came to India, I thought I knew what to expect but I was surprised, and to me it was like coming to a new planet. When I first visited Indco I was surprised by the "western" feel it had, when compared to the feeling I had from India in general. I had a view of India as a developing country, with a blend of mystics, unfamiliar sights, noise, pollution and poverty. The contrast between these sights and the environment at Indco was strange to observe for a Norwegian who is used to more equality in daily life.

However, I lived in India with a group of students and leaders from HISP (Health Information Systems Project), which was very useful in helping me understand the Indian culture and differences between domestic IT-industry and GSA. I was well received at Indco and the interviews were performed without much time constraints. The interviewees were selected from all levels at Indco to ensure an in-depth view of the issues. While conducting field work in India, many informal conversations took place, which has also been important in building up an overall knowledge of the employees views of culture, both in general and reflected to GSAs. Two of the interviewees at Indco had worked on-site with a Norwegian firm not interviewed, but with similar complexity to Arctic's work. This experience helped to develop a broader perspective related to cultural issues.

4.3 Data collection methods

This section describes the methods used for collecting the data material, including primary and secondary sources of data.

4.3.1 Primary data source

The aim of the interviews was to identify cultural issues and increase our understanding of challenges in managing GSAs. A qualitative, semi-structured and open-ended questionnaire (Khan et al., 2002) was used for this purpose. Confidentiality and anonymity were assured to the interviewees. While overall observations and findings were to be shared with the participating companies, it was promised that no individual responses would be identifiable in the reports.

Interviews

Interviews were conducted during winter/spring 2004 with the Norwegian and Indian firms. In March 2004, the fieldwork in India took place. During an extensive 2-3 week period, interviews and observation was conducted at the Indian software firm. Various factors affected the conduct of the interviews, factors including my own unfamiliarity with the GSA environment and with Indians in general. In addition, the interviewing process was largely unfamiliar to me. It was a learning process that influenced the data gathering both negatively and positively. The positive aspect was that my lack of experience with GSAs and India, implied that I came in to the process with limited baggage on how things should be. On the negative side, my lack of experience meant that I had to ask many questions which to an experienced researcher would have been relatively obvious.

My own status among the interviewees affected the level of information they were willing to give. For instance, not being seen as a serious and knowledgeable actor in GSA may have impeded the respondents from parting with a lot of details. Furthermore, as a fairly young student from Norway, the age of the interviewees was an influential factor to the information obtained. Similarities in ages between the researcher and interviewees were beneficial as the interviewees felt they could more easily “speak the same language.” I felt more at ease with the developers, who were about my age, and thus engaged in a two-way communication. With the senior managers it was more of a one-way communication, partly because I was regarded as relatively inexperienced. Interviews were conducted using an interview guide which consisted of four broad areas:

1. General questions
2. Specific questions to employees at various levels
3. Improvised questions
4. Informal questions

The interview guide was not a detailed questionnaire, but served as a conceptualizing device to guide me to the issues which I wanted to cover. The respondents were encouraged to elaborate on their responses. The interviews typically lasted from 30-90 minutes. In Arctic's case I conducted interviews over telephone and E-mail due to distance, funds and time constraints. Table 4.1 provides a summary the interviews conducted.

Table 4.1: Interviews overview.

Position level	Interviews
System manager	1(1) ³
Business manager (US)	1
Business manager (US)	1
Manager, technical(EU)	1
Project manager	1(2)
HR manager	1
Developers	5
Indco CEO	1
Arctic CEO	2
Norco CEO	2

Specific episodes regarded as being important in the relationship were identified, and respondents were asked to further elaborate on them. The interviews were recorded, and transcribed shortly afterwards. This method was suggested by Walsham (1995) as it is a useful way to capture the data while it was still fresh in mind for the researcher. The use of a recorder helped to gather all the information, and made it easy to track back unclear issues. To clarify missing information and misunderstandings from the interviews E-mails and instant messenger was used with both the Indian and Norwegian firms. Sometimes the misunderstandings were cleared and sometimes not. Example are for instance Arctic's use of an Indian negotiator, connected to Indco, in the first phase of the GSA, this was not evident after the interview with Arctic, as Indco made me aware of this fact.

4.3.2 Secondary data sources

Company literature was also studied through websites, company manuals and publications to broaden the perspective of the cultural issues. For example, Indian Human Resource manuals and guidelines for new employees was reviewed and compared with existing Norwegian material.

³ The number in the parentheses indicates informal interviews not recorded.

4.4 Limitation of the research

Some limitations to the research are identified in this section, including issues of cultural bias, the phase of the GSA projects and time span of the research.

The researcher's cultural bias (Khan et al., 2002) might potentially and unconsciously affect the interviews with the Indian respondents. Furthermore, the interpretation of the data collected by the researcher was through a "Norwegian lens", which may have led to unconscious stereotyping and generalizations. To try and deal with the bias I had extensive discussion with my supervisor, who is of Indian origin. Another limitation was that I did not have a longitudinal view of the overall project, but rather a snap shot picture. This could have impeded my understanding of how cultural issues change during the course of the project.

The Norco case was in a preliminary stage of their GSA relationship at the time of writing, and no conclusion of challenges could be extracted. Therefore, Norco's case will not be used to great extent in the analysis.

In summary, in this chapter the interpretive research method adopted was described as well the reasons of why it was selected. Details of the data collection methods, source and analysis approach was discussed. In the following chapter, I present an overview of the Indian and Norwegian IT industry, in terms of economics and business environment. This helps to provide the reader with a better sense of the context in which the Norwegian-Indian GSA relationship was situated.

Chapter 5 India and Norway

This chapter presents the Indian software industry, and illustrates why it has achieved a unique place in the global software outsourcing realm. Furthermore, it provides the economic context of my case study pertaining to why GSA is a vital business opportunity for small sized Norwegian firms. The chapter also contributes to building an understanding of the accelerators and inhibitors behind India's software industry. Attention is also paid to Norway's role as an IT-actor in the international software development market.

5.1 India

India has developed into one of the largest cost-competitive technical workforce nations. The country has a long tradition of being the target country for offshore activities and is undoubtedly the leading subcontractor in global software outsourcing (Heeks et al. 2001). According to Terdiman and Karamouzis, India dominates 80-90 percent of the total offshore development revenue and is expected to be the key leader in the next 3 years (Terdiman and Karamouzis, 2002, Khan et al., 2002). The core of the Indian IT industry is located at Delhi, Bangalore, Pune, Hyderabad and Chennai (Sahay et al., 2003).

5.1.1 India's growth

India has built up an excellent reputation during the years, with a focus on strict system requirements. A prerequisite for the immense growth has been India's highly competitive universities and technology institutions, and being the second largest English speaking nation after the US. However, the increased growth in the IT section is putting increased strain on the educational system (NASSCOM). Table 5.1 present the output of the educational system.

Table 5.1: Degree Level: Engineering Admissions, Professionals.

Year	Admission	Graduates	IT Admissions	IT-professionals
1996	103,933	60,749	67,556	N/A
1997	138,450	59,311	89,957	42,846
1998	157,556	68,824	103,067	46,112
1999	179,299	75,177	118,947	49,617
2000	233,351	82,107	125,522	53,370
2001	256,686	109,376	133,053	71,066
2002	282,355	124,469	141,037	81,423
2003	310,590	141,646	149,499	93,968
2004	341,649	184,347	158,469	99,162

Source: NASSCOM

The employment growth rate in India 2002-03 was 24.4 per cent from 2001-02 total recruitment of 522,250 professionals. Estimation from NASSCOM for 2008 was a demand for 1.1 million software professionals, the supply from the educational system estimated to be 885,000. This leaves a shortfall of 235,000 people in 2008 for the Indian software industry (NASSCOM).

Most work undertaken by developers in developing countries is relatively low-skill software construction and testing, leaving the high-skill tasks of analysis and design to western developers. For example, software developers from India do take on a number of cradle-to-grave contracts, but 80% or more of the revenues come from grunt work (Heeks 1999). However, the constant maturation and experience gained by Indian firms has moved them towards more mature relationships, involving research and development projects with western firms. More Indian firms have achieved quality processes like the ISO certificate and Capability Maturity Model (CMM). The certification and quality management systems and processes (developed and refined over the years) have helped Indian software vendors undertake highly repetitive projects with greater efficiency, tighter deadlines and higher employee productivity (Thiagarajan, 2002). The growth of process maturity and ISO certification also shows that certified firms benefit by being more visible in their markets, this translates to an ability to grow faster and take on larger and more important projects (Asundi, 2001).

India's global software outsourcing export has grown from \$2.6 billion in 1998-99 to \$9.55 billion in 2002-03. The estimates for 2003-04 are \$ 12.2 billion and it will reach \$70-80 billion in 2008 as table 5.2 describes (NASSCOM).

Table 5.2: Potential for Indian Software and Service Industry by 2008.

Category	\$ billion
IT Services Exports	28-30
ITES Exports	21-24
Product and Technology Services	8-11
Total	57-65

Source: NASSCOM, 2002

The Indian software industry is export orientated, with most of its exports headed to the US (Asundi, 2001), constituting 71% of total software exports, followed by the UK with 14%, Europe (excluding UK) with 9% and the rest of the world with 6% as of March 2002-03 (Bhachech, 2003, NASSCOM). A more detailed view from Forrester research (cited in NASSCOM) claims that firms spend an average of 12 per cent of their IT budget on offshore outsourcing, and this is predicted to grow to over 28 per cent by 2004 (Khan et al., 2002). However, prediction on the size and growth can be less reliable because of the US recession and war in the Middle East (Sahay, Krishna, and Nicholson 2003).

5.1.2 Governmental issues

The government of India has strongly encouraged the development and export of software by Indian firms. The STPI (Software Technology Parks of India) was established by the government of India (Department of Electronics) and has played an important part in providing the infrastructure for the development of the Indian software industry. Governmental policies and legislation are important factors in attracting investors and customers to the software industry. The Indian government invested in satellite technology in the late 1980s after recognizing the need to connect the young Indian software centers with the outside world (Carmel, 1999). One reason for this was to stop the “brain drain” from India and gain some of benefits from the growing software industry. In light of the tremendous growth of the Indian software industry this seems to have been a successful move.

The growth of the major software firms India was also influenced by the abolition of wealth tax. An article in India Times claims that a reform by Manmohan Singh’s, currently India's prime minister, led to the abolition of wealth tax on shares. “In the bad old days, no businessman wanted his share price to raise much, because it invited an extortionate wealth tax. In such circumstances, creating shareholder value was harakiri, so entrepreneurs kept profits black and off the books. The abolition of wealth tax on shares made it possible, for the first time, for entrepreneurs to aim at a 10-fold or 100-fold increase in share prices without committing tax suicide”(Swaminomics et al., 2002). The Government has clearly favored the software industry with a liberalized tax policy such as tax holidays and concessions under Section 80 HHE of the I-T Act. The Government has also chosen not to interfere with major software businesses (Thiagarajan, 2002).

5.2 Future challenges for India

This section will consider some of the major inhibitors for India’s further growth and stability as the champion of GSA in the future.

5.2.1 Wages

The global demand has caused India's IT wages to rise 10-15 percent pr. year as of 2004 (NASSCOM). As a result of this, India is no longer competing mainly by offering a low development cost. Other charges, such as overheads, transport costs, telecommunications cost, office space, travel allowances etc. are not that much lower than in other countries. This can potentially weaken India’s cost advantage, although it still figures as a low cost location (Heeks, 1996, pp. 116-119).

5.2.2 Attrition

High attrition rate (sometimes 25-35%) has characterized the Indian software industry which however has shown a reducing trend in the last few years. According to NASSCOM, in the last three years, the turnover rate has fallen by two-thirds, from 35 per cent in 1999-2000 to 25 per cent in 2000-01 and to 12 per cent in 2001-02. This trend may change again as there signs of increased recruitment activity by Indian companies in 2004.

Relatively, even though the average attrition rate in the Indian software industry continues to be high, it has declined over the past year owing to better HR practices, and improvements in work culture (NASSCOM). The employee turnover rate of India's second largest software exporter, Infosys, stood at 6.2 per cent in 2001-02 as against 11.2 per cent in 2000-01. While earlier, attrition was due to IT professionals desire to immigrate to the US or Europe, uncertainties in the Western market, especially the US, have decreased this flow. Also, as the Indian software industry has moved up the value chain, attrition rates may further decrease as developers are finding more challenging tasks at home.

5.2.3 Infrastructure

The lack of a fully functional infrastructure and telecommunication system in India was a threat to its future evolvement. The initiative from the Indian government to establish the STPI (Software Technology Parks of India) centers has improved the situation (STPI, 2005), making the physical infrastructure in India up to date.

5.2.4 Near sourcing and Insourcing

Other options are forming for Western IT-firms, including near sourcing, where firms look for sites near their countries in order to minimize the distance between operational sites, and to reduce the cultural gap between the firms. A research by Imsland (2003) stated that a main attractor between a Norwegian and Russian firm was the similarity of mindset (Imsland, 2003), potentially easing the cultural gap.

Another collaboration form is insourcing, multinational firms will choose to set up their own operations in India (E.g. Dell, IBM), but it still means jobs for the Indian software workers, although the local Indian companies might then weaken their market position in the future.

5.2.5 Future challenges for India

Competition from other low cost developing countries in the global software market is noticeable; countries like China and the Philippines are booming up and aiming to place themselves as new low cost IT suppliers. The downturn in the global economy in 2001 and China's growth in the software market has created new competition for India. A research project by Khan et al., (2002) revealed that many Indian firms are already facing price pressure from countries such as China and the Philippines, making

it difficult for many firms to sustain their businesses as they move up the service chain to increase their value in performance (Khan et al., 2002). To maintain their position, India has begun to see new markets possibilities in Europe and Asia, and has started to outsource part of their work to Asian low cost countries like China and Vietnam (Sahay et al., 2003). The latter part can further increase the complexity of the software outsourcing process for the actors involved.

5.3 Norway in general

This section gives a brief overview of Norway's role in the international IT market. Little research has been conducted on Norwegian GSAs, and it proved difficult to find relevant information about the Norwegian IT industry's role in the global market.

Norway is a wealthy country and has according to UNDP (United Nations Development Programme), for four consecutive years been acknowledged as the most developed country in world, based on life expectancy, living standard and education (Krosslid, 2004).

Norwegians firms are under pressure from international markets, this goes for both IT and more traditional actors in the market. The reason for this lies in the nature of the Norwegian economy, which is small and open in nature (Bjornland, 1998) and dependent on import and exports. In general the Norwegian industry is weak and not considered global, although the Norwegian oil industry is somewhat renowned. There has not been a global drive among companies, such as have been in the neighboring countries: Sweden has IKEA, Volvo and Ericsson; Denmark has Lego and Carlsberg; Finland has Nokia, and probably others.

The Norwegian IT market is mostly comprised of small scale actors, with some exceptions such as DNV and Tietonator. There is a widespread notion that Norwegian IT-companies lack an international focus. Though there are notable exceptions such as Fast, Opera and Trolltech among some. Possible explanations for this reticence include lack of experience with the global market, the relative immaturity of the Norwegian IT industry and a cultural tendency to "stick with the old".

Norway is a small actor in the global IT-industry and can not compete on costs alone. In order to compete on an international level Norway must focus on knowledge, competence and attitudes (Reve et al., 1995). GSAs can prove to be the leverage for Norwegians firms to secure domestic companies from outside competition. Norway and Scandinavia in general are attractive markets for Indian firms. Scandinavian firms are held to provide high tech work, long term projects, allow the GSA teams to contribute creatively and often have a long term view of the GSA relationship.

5.3.1 Salary

This section shows the relative salaries for Norwegian IT-workers as of 2001. Average IT salaries in Norway is between 300 000-400 000 Norwegian kr/NOK. This can illuminate why Norwegian firms see outsourcing as an option for reducing costs due to high wages and also to gain a competitive edge. Figure 5.3 present the salary chart for Norwegian IT-Workers.

Table 5.3: Norwegian IT salaries.

Percent	NOK
1, 9 %	Less than 200 000
4, 9 %	200 000-250 000
12, 4 %	250 000-300 000
34, 3 %	300 000-400 000
24, 7 %	400 000-500 000
16, 6 %	500 000-700 000
5, 2 %	Above 700 000

Source: Werenskiold, 2001.

5.4 Summary chapter 5

This section has presented India as a major driving force in the global software market and some of the prerequisites for this growth, and it has given a small presentation of the Norwegian IT-industry. Furthermore, it has presented some future challenges for the GSA industry.

The aim was to provide some background in understand the immensity of GSAs and understand why Norwegian firms opts for going abroad as part of their business solution, given the economic constraints in the Norwegian market.

The following chapter presents the case material of this thesis.

Chapter 6 the cases

6.1 Introduction

This chapter presents the case studies, describing both the preparations the firms made prior to initializing a GSA project, and the day-to-day conduct of such work. It aims to present a background of the cultural issues concerning GSA projects.

This section begins with an introduction of the firms involved in this research and continues with a presentation of the projects. The case study details are interpreted with material that is more general in nature, and not directly related to the specific projects studied, in order to place the issues discussed in a wider cultural context.

6.1.1 The firms

Arctic is a small, newly established Norwegian software firm, developing cutting-edge technology for web development, including web presentations, video on web and software tools for developing visual websites. Arctic has received positive feedback from the software market in Norway on the product. They started with software outsourcing with Indco in late 2002.

Norco is a small Norwegian software firm established in 2001, and their priority area is business intelligence/Data Warehousing. The firm has despite the uncertain software market achieved to win reputable clients with their business idea. An aim of the firm is to secure steady growth with help from Indian partners.

Indco started its operation in 1994 at the Software Technology Park in Hyderabad, India (STPH) as an offshore facility to customers overseas. Indco provides its customer base in USA, Europe and Asia with on-site, off-site and off-shore development models. With a corporate history of more than 9 years, Indco has delivered many large-scale enterprise class solutions using cutting edge technologies and re-usable frameworks. While Indco's headquarter is located in India they have departments and partners located around the world, including the US, Norway, Denmark, Germany, England, Singapore, Japan and Thailand. Indco obtained ISO 9001 certification in 1998, and plans to obtain the CMM and pCMM assessments in the near future.

Trivtech is a small software firm located in Trivandrum, India. Trivandrum is located outside the traditional main centers of software development in India. They have approximately 100 employees at the time of writing. Trivtech is internationally orientated, where sixty percent of their revenues come from Japan, followed by the Middle East and Africa. Norco is the company's first European partner.

The main reasons for software outsourcing for the Norwegian actors were:

- Reducing cost
- Gain access to the Indian skill pool
- Minimize time to market

The Norwegian firms saw these benefits as key factors to succeed in the unforgiving economic times the western IT industry was, and to a degree is still faced with. Arctic regarded GSA as a business-strategic move that could be beneficial in a long-term perspective for the GSA partners.

6.2 The case of Indco

GSA projects are taking place between Arctic and Indco around cutting-edge software for web development. Indco was very forthcoming in cooperating with the research project, as they wanted to learn more about the Scandinavian market.

6.2.1 The projects lifecycle

This section presents the GSA project as a software project's lifecycle, and establishes an understanding of some of the challenges faced when initiating and developing a GSA project. The project's lifecycle depends on the complexity of the product being developed, being its size, technology and nature. Increased complexity raises the emphasis on strengthening communication processes and control in the project's lifecycle. Table 6.1 presents the Waterfall model, which describes the phases of a GSA lifecycle, where each phase builds on the previous phase. These phases help to provide the analytical framework for the case presentation.

Table 6.1: The Waterfall model.

Project Phase	Tasks
Project origination	<ul style="list-style-type: none"> • Select a project\firm.
Project initiation	<ul style="list-style-type: none"> • Agreement between the firms. • Preparation between the firms. • Develop project plan.
Project planning	<ul style="list-style-type: none"> • Refine the project plan. • Estimate the project.
Project execution	<ul style="list-style-type: none"> • Developing. • Gain project acceptance. • Monitoring and controlling.
Project closeout	<ul style="list-style-type: none"> • Assess the outcome of the project.

Based on The 'waterfall' model (Sommerville, 2001).

6.2.2 Project origin

This section will describe the initiation of the GSA's and how Indco attracted customers in a teeming global software market. Normally Indco is not contacted by firms for initiating GSA projects, but they rely on E-mail marketing. Indco's marketing method consists of conducting research on the Internet to obtain information about potential clients in a limited geographical area or business segment. This information is used to identify the customers where Indco potentially can add value to the business process of the firms. As described by an Indco manager:

*We see where we could fit in and create a synergy effect.
Indco, US business manager*

The contact phase starts with E-mails to potential clients. It was estimated by the managers that maybe 3-5% of the contacted firms showed interest in Indco's proposal.

We send 200 mails, and maybe 5-10 people will reply.
Indco, US business manager

After the initial proposal, Indco presents its credentials in the areas of software development to their potential clients. Indco tries to analyze the business processes of the given firm and what value propositions can be offered; including issues of reducing costs, skill gaps and time-to-market. 1-2 out of 10 potential customers normally go ahead to initiate a project.

Clients' usually do not come directly to Indco, unless the firms have earlier experiences or customer references. In a crowded Indian market creating visibility is a challenge for most small to medium sized firms. The Indco manager felt that customer references on their own were inadequate, he said:

The customer references will hardly give you 5% maximum, in a month maximum one customer.
Indco, US business manager

The "race to the bottom" is a widely used term for the Indian software industry, particularly among small and mid sized firms, to refer to how firms underbid each other to gain customers. A common strategy is to bid extremely low in the first project, sometimes even below their break-even point. The motive being that once they have done one project, they will be eligible for a new assignment at the same firm, in a boot strapping manner. It was claimed that this was not a widely used strategy at Indco, but it had occurred from time to time.

There are times when we have done it. But it is more to gain a customer.
Indco, US Business Manager

6.2.3 Project initiation

In the initiation phase (at Indco: Request for Proposal (RFP) phase), if the firms are unfamiliar with each other, they start with a small pilot project, to get familiarized and establish a relationship, enabling more complex tasks in the future. In addition, starting small was regarded by the managers as important as it helps to gain trust and confidence between the firms.

Start with a small project, where you really can test us out whether we are good or not. That's how we build confidence with the client.
Indco, US Business Manager

Building a relationship, thus a shared environment for the two sites, was regarded as a vital goal among the managers in order to achieve a successful GSA project. In the

preliminary phase, ICTs was widely used by the managers to get more clarity of the client's requirements.

A number of times you get on the chat. Clarify doubt, things get a little clearer.
Indco, US Business Manager

Small issues were usually settled in the first few months. Issues include how the client wanted the code, documentations preferences and strictness on time issues. This phase also helped to establish the rough outline of the project, including issues of contracts, time limits, payment and technical aspects, and according to the managers, this phase helps to gain clarity of the overall GSA goal.

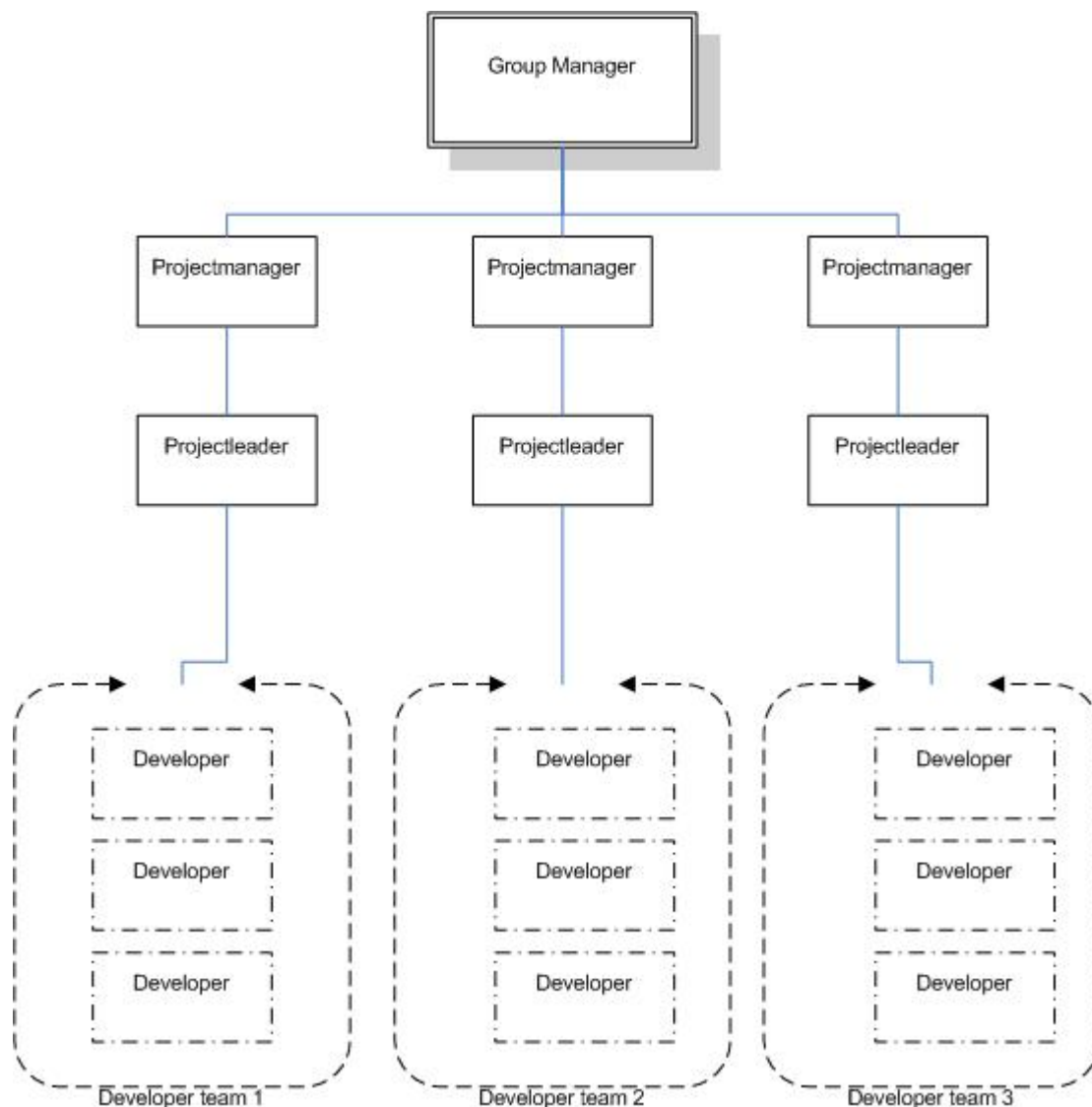
Once there is a little bit of clarity in this, and then things start to happen.
Indco, US Business Manager

6.2.4 Project planning

Indco assigns a Project Manager (PM) to the project depending on the skill-requirements of the client. Usually the PM is the one who has handled the proposal and secured the contract. The PM assembles a development team according to the initial requirements and takes care of requirements issues, including technical routines, basic coding, programming, refinement analysis, and communication with the client. Communication can vary from daily to weekly reports depending on the project.

The organization of the project team at Indco is hierarchical in nature, which helps to ensure a level of transparency, and a clear line of communication between the different levels of the team and the client. The following figure is a presentation of the structure in a typical GSA project at Indco.

Figure 6.1: Indco organization chart.



The organization chart describes the internal hierarchy in a GSA project at Indco. It shows the communication lines between the Group Manager (GM), PM, Project Leaders (PL) and developers. Communication typically goes through these hierarchical channels. The GM has direct links to both the PM and PL, and can intervene if there is a challenge the lower levels are unable to handle.

A usual project is run by the PM, while smaller sized projects are run by the PLs'. The PM handles the daily communication with clients. The developers rarely have personal communication with the client. Communication goes through the PM to gain transparency of the process, and avoid "spaghetti-like communication." The developers send their questions to the project manager, who answers or send them to the client for clarification if they are unable to answer. This is time consuming, but helps ensure that the client is not overburdened with E-mails from ten developers asking the same question. It also gives the PM an overview of what areas the developers need clarification and can try to bridge these gaps with the client.

If an issue in the project arises that the PL is unable to deal with, the PM will come into play. Similarly if the issues are of high consequential risk for the project, the project leader might take over and handle the situation. In a large project, the GM will be directly responsible for the delivery.

The next section discusses estimation issues related to requirements, attrition and language, which are important when planning and executing a GSA.

Estimation and requirement processes

An essential part of the project planning phase is estimation and requirements analysis. In projects with a fixed cost Indco can lose money, and where there is man-hour they can lose clients, if the cost exceeds the client's expectations. The respondents rated these as the most difficult processes in a GSA project.

The biggest problem is estimation.
Indco, EU Technical Manager

These two phases are crucial, as they help to establish the different modules and goals of the project. In some cases, where the modules are connected, it can take tremendous efforts to eliminate small mistakes from this stage later on in the project, thus adding to costs and time. GSA's with unacquainted partners raise challenges, as much effort is used to get familiarized with the work methods and culture to gain clarity of the overall goal.

Requirements

It was claimed by some of the respondents that if the client easily captures the requirements and sends the analysis document to Indco, this phase was easier. However, this usually only applies for projects with a low level of complexity, as described by a manager:

That time we are only doing coding, but where we are doing end to end, directly there is some requirement gap.
Indco, EU Technical Manager

In more complex projects capturing the requirements internally and transmitting them to an external source does not necessarily ensure that the other side understands the requirements, as they can imbue different meaning in different cultural contexts. The initial phase was according to the managers also used to develop a shared context, as it eased the challenges of future misunderstandings.

We need the same background, there is a mismatch.
Indco, US Business Manager

The experience and background of the actors, more so in complex projects, plays a vital role. This was a major challenge in Indco-Arctic's case where requirements changed in an evolutionary manner and the firms had little prior experience with each other. Gaining mutual understandings of the cultural background and the client's business processes was deemed as a significant challenge by Indco.

Both of us got to be "on the same page", "talking the same language". Once we start doing that, things become easier.

Indco, US Business manager

The quality of communication is vital to effectively transfer this knowledge. Indco claimed that E-communication methods, coupled with distance, did not add enough depth to the communication.

Communication is very important. The client has to be very clear about what he wants. Most of the time the client is not, they think they are...

Indco, US Business Manager

Categorization system

Indco use a requirements categorization system to adjust the projects to the potential slippages. It is a common system, where they rate the requirements into 3 categories:

- Essential features.
- Important features.
- "Nice to have" features.

This system does not completely negate the essential problems of capturing and interpreting the requirements as the client intended. Misinterpretations in the requirements phase will be transmitted to the project execution phase via the categorizations system. However, it gives Indco some flexibility in accomplishing deadlines as some requirements can be ignored when time is a limited resource, which is often the case.

In complex projects, Indco relies on on-site collaboration to minimize potential gaps that cultural differences introduce, by increasing knowledge of cultural backgrounds and business processes of the client. Occasionally, a client travels to Indco for discussion and presentation of the requirements. This contributes to added clarity in the requirements capturing phase, and to establish that the managers clearly understand the given requirements.

Explain the requirements and see whether we have understood the requirements or not, then we move on.

Indco, EU Technical Manager

On-site collaboration was regarded by most respondents as the most effective way to bridge cultural gaps. In the Indco and Arctic case, the complexity has raised difficulties in the requirements phase. A great amount of time was consumed to clarify misunderstandings and doubts and also gain a level of familiarity between each other.

Estimation

Estimation often raises challenges at the management-level, as they often tend to only consider the top-level of the project. For instance, top-management can acknowledge the need for a new logistic program, but fail to see all the requirements that are needed for such a program. In some cases experienced at Indco where requirements are inadequate or highly complex, the estimated price for a project can be 2 million dollars and at the end cost 6 million dollars, because the initial estimation was done without full visibility of the requirements and the complex tasks they imbued, and also the hidden costs inherent in GSAs. The term “Shopping for price” is widely used in outsourcing, and is linked to the high expectations some Western firms have, to obtain instant gains from outsourcing. This is rarely achieved due to the hidden costs and time used to stabilize GSAs, as described by an Indco manager:

If you think for six months you will see big benefits, it will not happen. After six months you start to reap benefits of it, because you understand more.

Indco, EU Business Manager

This challenge was more prominent in GSAs with American clients. According to Indco, European firms, as compared to US firms, preferred long term relationships and where more preferable to work with than American firms, who were very focused on time and cost issues, and not on the maturation of the GSA relationship.

In the project with Arctic, Indco wrongly estimated the size of the project in the start, which led to that the PL and 5-6 employees, was taken off the project. Indco management stated that it was due to reasons of profitability, as they could not use as many employees on the project over a long time period as it did not reflect potential gains for Indco.

Attrition

In order to achieve a long term GSA relationship, trust and stability is a necessity, which is challenged by the high Indian attrition rate. Control and stability in attrition is regarded as vital to increase stability and predictability in a GSA. However, attrition is a challenge for most Indian firms, who experience turnover of even 30-35% annually. These high rates break the continuity of the relationship and lead to loss of vital knowledge.

Indco has successfully minimized their attrition rate the last years, partly due to their HR efforts. Their attrition rate is currently at a healthy 10%, which is below the average in India of 20-35% (NASSCOM). Indco's success can be attributed to its focus on the relationship with its employees, and on creating an environment where the employees feel secure and at home in. As the European Technical manager points out:

When you spend 12 hours of your waking time in office and then go to your family, so if the 12 hours spent here he is not happy, then he will definitive look for a new challenge.

Indco, EU Technical Manager

The managerial focus at Indco was to secure loyalty between the firm and its employees, thus building ownership and relationship to Indco. It is a long term strategy to build up the employees' loyalty between Indco and their employees, as short term employees was not a good option for smooth running projects.

If employees start to look at Indco in the short term it will be a problem.

Indco, EU Manager

Motivation was also enabled by providing employees with a challenging work environment.

We have a system where we continuously engage them. We need to continuously motivate them, because if it is maintenance work, if there is no creativity then there is no challenge.

Indco, CEO

A HR method used for understanding motivation needs at Indco was to conduct regular discussion with the employees on various work related issues. Indco managers need to create a "family" relationship, so that employees feel happy in a caring environment. The role of attrition is also minimized at the time of hiring, as Indco run background checks to analyze the potential employee before selecting him or her. Still it was not easy for the HR managers to predict if the employee would stay for a long time period at Indco. A HR manager said:

He will be with us tomorrow, but 3-4 months after joining he might have a better offer, like a better plan, better money.

Indco, HR Manager

Despite all efforts by Indco management, attrition can still be a challenge in a GSA. In order to minimize the challenges of attrition Indco use a concept called shadowing to minimize the potential negative effect of attrition. Shadowing is a work buffering through a focus on project documentation to ease new members into existing projects. If the project runs into a critical phase and more employees are needed, or if several employees leave in a short time span, the documentation can help to give knowledge

to new project members to quickly take on project tasks, and support the further evolvement of the project. At Indco the employees have one month discharge notice, so in most case Indco can prepare in advance for replacements. However, if a project was finished, the employees could leave immediately if wanted.

Indco tries to make their projects people independent by using “shadow” resources. If a developer quits, a “shadow” resource will come into play. For a project with 10 employees Indco usually keeps 2 employees with the same skills in backup. It was estimated that the “shadow” employee will have the same productivity in approximately 3-4 days. The only change will be the slight variation in work methods between the two employees. Although in the PM role shadowing is harder, since the PM does most of the communication and soft management which is rarely ever documented.

However, there is always a person second in command, who could take over if needed. If the PL resigns, the GM takes temporarily control of the ongoing project. A manager pointed out how backups are kept to cover most assignments.

*For all technical resources we maintain a backup
Indco, US Business Manager*

Replacement of a PL or PM is first attempted internally, and only if that that can't be found, external recruitment is attempted.

6.2.5 Project execution

The project with Arctic was regarded by Indco as highly complex and innovative. It was a challenging GSA due to its evolutionary nature, and the introduction of new business ideas. The PM at Indco where impressed by the features in the project.

*Some of the features could be patented by Arctic
Indco, EU Business Manager*

The complex and innovative nature of the project led to friction at an early phase, based on misunderstandings of the overall aims of the project. Also, contributing to these misunderstandings was pressure from Arctic's customers, which was transferred by them to Indco. Eventually, negotiations had to commence to avoid a breakdown. Indco perceived that the main reason for the potential breakdown situation was Arctic's lack of experience in GSA.

*Arctic was a newly started firm and thus had no organizational experiences in outsourcing.
Indco, EU business manager*

Scope changes also required a rebuilding of the initial version of the program, which was not developed on stable requirements and an overview of the overall project aims.

The changes from the proposed solution to the delivered program were significant, as explained by the Indco business manager.

You won't believe that when we proposed a solution for whatever Arctic had asked and what we actually delivered, it could be like a difference of...I would say like ten times!

Indco, EU business manager

As a result of these changes, the first deadline was missed by weeks. Clearly open communication and shared understanding was lacking in the newly formed GSA relationship. And in retrospect, the actors were aware of the misunderstandings, but had failed to use this awareness constructively.

At one time I think it was not so great, the first instance that is when we actually missed the deadline we failed to inform them.

Indco, EU Business Manager

The frequent scope changes and Indco's unwillingness to firmly say no to these changes, given the project's time constraints, eventually led to delays in the project, not an uncommon feature in outsourcing projects. As described by the business manager.

Slippages is bound to happen, nobody is perfect.

Indco, EU Business Manager

Indco was not affirmative and could say no to Arctic, and they tried to incorporate new changes within the project's estimated time span, even though they saw that the deadline could not be met with these changes in place. As a manager described:

The biggest thing here is there is a fear of losing a project if you say no.

Indco, EU Technical Manager

As a consequence of the time-slippages, Arctic's manager traveled to Indco for negotiations. This meeting resulted in a new level of clarity in the project, but also led to further redefinitions and adding to scope, and redoing parts of the software already developed. At the meeting Arctic built further on their vision adding new features to the project, as described by the business manager.

A consequence of meeting, was that a lot of scope was added, and their ideas, because they had come with a lot of ideas. He is a pretty imaginative guy.

Indco, EU Business manager

According to Indco, if the communication cycle includes effective feedback, then the initial estimate for a project will hold. However, this is hard to achieve in a new GSA relationship, where a shared understanding does not exist. A general practice at Indco

is to send reports every week to the client, discussing what has been recently achieved in the project and what issues needs further clarification. A manager explained.

The customer knows. Every week the customer will receive a report from the project manager.

Indco, US Business Manager

However, this reporting was not effective in the Arctic case:

Delivery failures from Indco side and frequent scope change from Arctic side.

Indco, EU business manager

By mutual consent of Arctic and Indco, in December 2003, two key developers from Indco came to Norway for on-site collaboration, with a view to minimize the effect of distance, and to also help to implement the first version of the program, due to Arctic's lack of internal technical expertise.

In this GSA creative ideas were difficult to transfer exclusively by ICT, and minimizing the effect of distance was seen as vital due to the abstract and innovative nature of the project. The respondents did not see it as conventional outsourcing (where you send the requirements and wait for the result), but more a joint collaboration between two equal partners.

The expectation the Indians IT-workers had to Norway in general was described as a similarity to the American culture.

We expected it would be like the American culture, but it was completely different.

Indco, developer

The Indco developers were positively surprised with their Norwegian experience. The cultural similarities and personal approach were something they could relate to, seeing that they was included and quickly fitted in on-site. This helped to reinforce a secure feeling within the GSA team.

The developers were not overly concerned of being separated from their home country. They claimed they were not afraid it would be a gap, because communication with Indco and their family was on a regular basis, partially negating the effect of separation.

Like we have our own family here, and we think in a different way.

Indco, developer

The effect of separation might have been greater if the relationship with the Norwegian firm had failed, possibly making the Indians feel isolated. Arctic was focused on building personal relations with Indco, and the team members changed soon from business colleagues to friends. They used their leisure time together, for

instance to go skiing, to restaurants and parties, described by the developers as a sense of “family-feeling”.

It was like a family, like a family manner.
Indco, developer

Arctic’s tried to incorporate the Indco developers into their working and social environments, and it was successful. The reception the Indians received helped to ensure a fruitful collaboration for both sides in the future. After returning to India, the developers stated that they were eager to go back to Norway for another six months.

We had a different experience there, like the language, the culture and what the experience was also it was completely different from India. We had a great experience in the past six months.
Indco, developer

An evident positive effect was the increased maturity it gave the GSA, and the issue of a closer relationship, as one rather than two separate teams working together. The Indian developers also became more visible in project as compared to before, when they had no formal or informal contact with the client, with communication being routed through the PM. One developer said:

It was just a work relationship. That was it was all. It was completely professional.
Indco, developer

They claimed that the client did not see the overall qualities of the individual developers, only their technical skills. A developer said:

It is just the product and that is the thing.
Indco, developer

To be recognized for their ideas and creative work was a “feel good” factor for the developers, which helped to personally motivate them.

The internal development process at Indco was not visible for the client, therefore the work methods used varied slightly between the sites. There were gaps in the understanding of certain issues, including technical, requirements and environmental. On-site collaboration helped to minimize these gaps and the work was visible upfront for both actors’. The Indian developers indicated that this experience would further help them at a client as they were now aware of the methods and preferences of the client.

They understood that our ideas and our way of work were matching and equivalent. There was a variation there, before leaving and after being there.
Indco, developer

The implementation phase was done on-site, and helped to minimizing some potential obstacles and support the relative lack of technical expertise at Arctic, as the Indco developers were more familiar with the environmental variables the system needed in order to run during the first beta period. Furthermore, it gave the client a more positive view of the product as these obstacles were negated through Indco's presence.

6.2.6 Project closeout, User Acceptance Testing

In the finishing stages of the project, the User Acceptance Testing (UAT) caused a severe time slippage. In software development, UAT is also called beta testing, application or end-user testing. When the first version of the program was finished, Indco transferred it to Arctic for UAT, but there was a slippage of 3-4 weeks, due to miscommunication and misunderstandings. The two sides perceived the UAT phase differently and tried vigorously to convince the other side towards their own interpretation. The Indco view of UAT was that Arctic should test the program, and accept if it was suitable to their requirements. As a manager explained:

We are not asking you to only accept the project. You test it and if you feel you can accept it, then you accept it.
Indco EU Business Manager

Indco claimed they did not receive proper feedback if the product was accepted or not. Arctic regarded UAT as the final deliverable of the project and no changes were to be made if they accepted it. This condition was solved after much confusion and efforts from both sides in clarifying the specifics of the UAT phase.

Arctic is currently releasing the first version of the software program and is in the planning stage of the second version of the program.

6.3 The case of Arctic

This section presents the case of Arctic. They were very forthcoming when I asked for their collaboration in this research project, as they felt they could learn and raise consciousness of the cultural issues involved in their GSA effort.

6.3.1 Project origin

Arctic's project started in 2002 and was driven by Arctic's desire to go offshore to gain specific expertise at a reasonable cost. According to Arctic, it was impossible for a small, newly established firm to locate the same expertise in Flash and .Net development in Norway. Norwegian IT-workers with sufficient expertise demanded "back breaking" wages, which Arctic had no economic capacity to support. The obvious choice for them was to go offshore in order to survive, and also to help their future growth.

6.3.2 Project initiation

Arctic had no prior software outsourcing experience and in order to find a suitable firm, Arctic's chairman used his existing network to locate Indco. Indco had a representative located in Norway, who acted as a negotiator for the preliminary phases of the project and was responsible for facilitating communication and sorting out issues. He was experienced in the Norwegian business environment and a consultant for Indco, and was fluent in Norwegian language, contributing to the sense trust, which helped the final decision.

*His business is aligned with Indco.
Indco, EU Business Manager*

Choosing Indco was a rapid decision, but not random. The main criteria's were Indco's expertise in Flash and .Net development. Reduced cost was seen as a contributing factor, but not the main one:

*The reduced cost was a nice side effect. We could not locate any Norwegians firms with the same expertise, and far from the same cost.
Arctic, CEO*

Arctic had heard much positive things about the Indian culture as compared to others. For instance, the Indian business culture was thought of as being highly professional and with high work ethics. Arctic was not disappointed after the GSA collaboration started.

*My opinion is that they put in the extra effort, mostly because the work we are doing is interesting.
Arctic*

On a social and cultural level, Arctic had no prior experience in cross-cultural collaboration and was not fully prepared for the gaps that would appear around the project. In the initiation phase, Arctic stated that their main worries were on how physical distances and cultural issues would affect the collaboration.

6.3.3 Project planning

In Arctic's case the complexity in the project contributed to challenges in the requirements phase, the complexity came from the reasons that the product was cutting edge technology and the evolutionary design of the program and changing requirements. However, both sides claimed that extensive resources were used to clarify doubts between them.

The gaps in the estimation process might have contributed to over-estimating the project size, and therefore overstaffing the project in the first phase. Arctic claimed the wrong estimate was a gift for them, as the project could not have been successful without the initial misunderstanding in the estimation process.

More Indco resources were used, than Arctic had initially bargained for. In the later phases of the project, the staff was reduced by Indco to a more appropriate team, currently consisting of 4-5 employees.

6.3.4 Project execution

Challenges arose early in the execution phase of the project, arising from the innovative and complex nature of the project. Two reasons were identified as challenging, straining the GSA relationship at this stage:

- The lack of prior experience in GSA agreements.
- The lack of fixed scope, the requirements were ever changing due to the complex nature of the project.

Arctic's and Indco's lack of experience with each other's culture, coupled with Arctic's inexperience as a software client also contributed to these challenges, as Indco describes:

Arctic was a newly started firm and thus had no organizational experiences in outsourcing.

Indco, EU business manager

This lack of experience led to several challenges, such as estimation, and thus contractual issues. Contractual issues were established in the project planning phase, but needed adjustments during its course. When the project started, the payment was based per hour. However, after the initial phase this was changed to per man/month to ensure more control by Arctic of the resources available. The change came due to

failure from Arctic and Indco to estimate the size of the project, and as Arctic describes:

They misjudged the size of the project, so it probably was a deficit project for them.
Arctic

Even though Indco probably lost money in the first phase, as the CEO at Arctic explained:

It probably was a deficit project for them.
Arctic

Despite the initial loss, Indco still delivered what was required, which gained them approval from Arctic:

When they have promised a thing, they keep it.
Arctic, CEO

This built trust between them, and it also indicated a willingness from Indco to build a long-term relationship even though the initial phase was challenging for them. After the preliminary method of payment, the firms decided to change it to a more appropriate model, based on per man per month. According to Arctic, the payment Indco received for the services were reasonably high, when compared to Indian standards.

Compared to what is usual in the software sector down there, they get fairly good pay. It is not that lousy.
Arctic

The issues lacking in this stage was clearly openness and communication, especially Indco's inability to say no to additional requirements. Moreover, Arctic were not effective in transferring their requirements with enough clarity for Indco to fully comprehend. The inexperience of a new GSA relationship, including the absence of a shared context contributed to communication challenges. Arctic and Indco were aware of this challenge, but lacked the ability to successfully shape a shared context.

We need to share the same context, and that is the biggest challenge for us to continue our good relationship.
Arctic

The need for long term relationships to mature the GSA process became clear for both firms. As a business measure to ensure this, Arctic prepared personal contracts for the Indian developers in the team. The contract stipulated that the Indco developers would not work for a competitor in the same software niche as Arctic, and if they were considering moving to a different firm, they would give an advance notice to Arctic.

However, Arctic was not afraid of losing the Indco developers, as the on-site stay had established a bond between the two sides.

The loyalty stretch beyond a contract.
Arctic, CEO

Indco used man/hour or project length as a basis for payment in their project. Indco's contract with Arctic was based on project length. However it had not evolved into a long term contract. It was not uncommon to have dedicated teams on long term projects which could run 3-4 years. The relationship with Arctic was maturing, and both firms were satisfied with the cooperation, indicating both partners were willing to make long term commitment.

In the future, it may be feasible to change the business model to be based on royalties, but no concrete steps have been taken in that direction.

Deadlines

Time related issues were a challenge throughout the project. Dealing with the time difference of 4 ½ hours between the two countries, was not as challenging as compared to India-US which is nearly 10 hours. Phone conferences and chat sessions could be held while both firms had office hours.

The challenge came instead from the understanding of deadlines and milestones, which was often misinterpreted, for example, what is a deadline and how should it be met. According to Arctic, Indco lacked the ability communicate the project status properly and to say no when they knew that additional requirements would lead to a potential time-slippage. As pointed out by an Indco manager:

Even if we try to negotiate it, if we say “no, it can’t be finished,” we think the client is in a better position for he knows the problem.
Indco, EU Technical Manager

The challenge of understanding the concept of deadlines might seem trivial, but led to a substantial time-slippage, almost forcing the project into a breakdown. Arctic thought they were being clear on deadlines and its meaning and that Indco should freely communicate the project status, implying whether they are able or not to meet a deadline. To communicate challenges of meeting a deadline was hard for Indco in the first phases of this GSA, but to Arctic knowledge they should have been aware of the perception off deadlines.

A deadline is a deadline. You don’t get a new one.
Arctic

According to Arctic, the norm of Norwegians firms is that they deliver things in accordance with the deadline, and if they know it could not be met, they

communicated that as soon as possible. However, for Indco this proved to be a challenge, much based on their submissive nature and fear of losing a client, and this came as a surprise for Arctic, as expressed by their CEO.

The Indians are not good at that.

Arctic

At this stage, both Arctic and Indco saw the need for on-site collaboration. Arctic requested on-site collaboration to minimize these issues, including managing issues of requirements, technical expertise and time slippages. An accelerator for these issues was that as the program evolved, the requirements changed. As the program was innovative, it quickly grew beyond the initial scope, the changes where according to the Indco manager was huge.

Technical expertise was needed, as it was the final stages of the first version of the program. Implementation could not be done solely by Arctic, as they lacked the internal technical expertise to do it fully themselves. Further, it also became evident that to transfer a project for implementation without the full knowledge of technical environment was not possible. The PM at Indco stated that:

There absolutely where some peculiarly problems as such, because the CEO as such is not a technical guy, so if you want to test a product, in a testing perspective as such, you need to have a testing and technical kind of person there basically.

Indco, business manager

Technical challenges, based on the testing environment had been a source for bugs in the project. The testing environment at the two sites was not negotiated upon early in the project, and the errors from testing could not be replicated at the other location. One business manager told about one incident where the Norwegian claimed that several errors occurred during testing, while the Indians where unable to replicate these bugs in their environment. The two managers spoke, and in an informal manner the Norwegian asked if the Indians thought he was lying about the errors.

There where some instance where, the project manager there was mentioning “do you think I am lying?” (Laughs) of course, it was said in an informal way as such.

Indco, Business manager

It became evident that the testing environment should clearly have been agreed upon at an earlier stage, as much effort was used in clarifying issues and the origin of technical issues. Arctic knew of the internal lack of technical skills, and should at an earlier stage have seen this as a potential challenge, but it became evident to them only when they tried to transfer the correct understanding of what the technical issues were.

Arctic's lack of technical experience and testing environment contributed to the two Indco employees arrival in Norway. They had more technical experience and knew

Indco's program version in and out, and were able to implement and test the system on-site.

Communication

Communication was a source of concern between the partners, as misunderstandings materialized due to the loss of richness in ICTs, as an Indco manager explained:

It does not add depth, but basically it is sufficient.
Indco, EU Manager

Also a reason for concern was the potential cultural gap, that in Arctic's opinion be magnified by ICTs, which the Arctic CEO was aware of:

There will always be communication problems between two different cultures.
Arctic, CEO

A method used to fill the gap of E-communication was telephone conferencing. It helped give the actors a richer context to expand upon. But generally, face-to-face contact was seen as the primary factor to achieve success in fully transferring these ideas.

ICTs used were mainly chat tools (like MSN, Yahoo messenger, etc) and E-mails, which gave the actors the chance to think before replying. Arctic felt that communication with E-mails was too slow, as Indco did not respond immediately when questions had been received. This improved as the relationship matured. According to Arctic, Indco shared their viewpoints on the importance of communication to establish an open relationship, and discuss issues freely.

We have an open relationship, if they have another opinion we discuss it.
Arctic

However, details of the communication methods were not discussed, and therefore it was thought at Arctic that the communication was being conducted in an effective manner. Also phone conferences were used, but Arctic did not feel comfortable with this mode in the early stages, since the relationship had not stabilized, and mature enough to trust this form of communication. The ICTs did not give enough richness to the communication process. Undoubtedly the richest communication was achieved during the on-site stay, described by Arctic:

When we have them here, that is the optimal method of communication.
Arctic

However, after the on-site collaboration, the communication via ICTs became more effective due to familiarization and the use of more informal talks. This informality was different from the way Indco worked with American firms, but was assumed by Indco to be a European cultural trait. A possible reason for this was that both firms had a long term view of the relationship and felt secure in the context of project.

Arctic had worked with other Norwegians firms prior to the Indian experience, but had never before achieved the same degree of close relationship, friendship and appreciation. It indicated that both sides were a good match when it came to values and mindsets, even despite the inter-country cultural differences.

Language

Another potential challenge arises from language issues, which can led to misunderstandings. Indco staff speaks good English, but they may not convey the same meaning that Norwegians do, even when they use the same words and vice versa.

Even in-house at Indco, English was widely used, to deal with the local diversity of language. In India, Hindi is the national language, but has many local variances. Indco employees came from various regional locations speaking different languages. For instance in Hyderabad, Telugu is the local language, but some of the managers are not local, and to communicate they use Hindi or mostly English at Indco.

Normally the Indian and European accent differs, but none of the respondent claimed that it had been a source of problem. A method applied at Indco to minimize the potential challenge was to keep the English language simple with clients, restraining the use of jargon. The Indco manager said:

You keep it nice and simple
Indco, US business manager

No significant difficulties due to accent or differences in the use of words were found between the sides. The variance in accent was no hindrance for the teamwork, as the small nuances was quickly mastered.

Project management

After the first set of deliveries was delayed, Arctic decided that the project management should be located in Norway in order to gain more control and visibility of the project. The goal was ensures more transparency and tighter control from Arctic's point of view. According to Arctic, this helped to stabilize the project after the initial challenges. However, the stabilization was not achieved only due to the transfer of project management, but also recognized by Arctic as the effect of maturation between the two firms.

A lot of cultural knowledge is gained, and maybe the most important lesson is that we see that it's possible to cooperate very well, despite our challenges.

Arctic

When the 1. Version was completed there was no significant challenges at Arctic's side of the collaboration. Two reasons were identified as significant to achieve this:

- On-site collaboration.
- Transfer of project management.

According to Arctic, on-site collaboration gained the project more clarity and maturity. And the transfer of project management gave Arctic more visibility and feeling of control in the project.

6.3.5 Project closeout, User Acceptance Testing

The UAT phase led to significant time-slippages in the project, while Indco waited for the confirmation if the program was acceptable and what additions should be made to the final version, Arctic thought Indco had completed the program and the acceptance was a formal procedure for closing the project. Eventually it was solved after much effort from both sides in clarifying what the UAT involved. Arctic's CEO own personal evaluation of the cooperation with Indco was that they were very pleased with the GSA project so far.

We have an excellent cooperation. There have been challenges during this period, but still we have together created a "world product!"

Arctic

6.4 The case of Norco and Trivtech

This section presents the Norco and Trivtech case, a relationship between a Norwegian client, Norco and an Indian software house, Trivtech. The source of the case material is mainly from the Norwegian side. The Indian firms' employees were not interviewed due to time constraints. Data was gathered from Norwegian sources and Articles about the two firms. The case description is to show the expectations and preparation a Norwegian firm applies prior to a GSA project, and the potential challenges that can arise early on in the relationship.

6.4.1 Project origin

Norco's product is Data warehousing systems to support business intelligence solutions, reporting and analysis systems. The product use existing technology, systems that most clients have in-house, but are rarely used to its full extent. Integration of existing solutions to deliver decision-making tools for management is the business value Norco wants to deliver to their customer.

Norco established an outsourcing agreement in spring 2003, to support the predicted growth and work-peaks, as they at an early stage saw the potential for growth based on their attractive customer base. So far they are pleased with the agreement.

The cooperation with India has so far been very good. We have focused on frequent contact at the management level.

Norco, CEO

India will be the secondary development resource for Norco, used to supplement peak workloads, especially skills required for system development and databases. The development will be done based on modules and programming assignments between Norco and Trivtech. Norco stated three factors behind their decision to go offshore, these are describe in the following table.

Table 6.2: Motivating factors of GSA for Norco.

Quick scaling of projects	<ul style="list-style-type: none"> • Support larger deliveries for a small firm. • Support a flexible employee economy.
Business and skill areas	<ul style="list-style-type: none"> • Specific expertise in areas of mathematics, statistics, DB technology and segmentation. • Support business areas outside the main area of expertise. • Support and attract more clients.
Economic	<ul style="list-style-type: none"> • More healthy economy in the company. • Greater margins on deliveries to customers.

It is a card in the Solitaire game, which is put in place well in advance, in anticipation of better times in the industry.

Norco, CEO

Norco is cautious of a potential lack of IT-workers in the coming years in Norway, as the demand for qualified IT-workers is expected to increase, making them harder to attract. While this is a positive situation for IT-workers and newly educated IT-engineers, but is potentially costly for expanding software firms. A trend which is already experienced according to the CEO:

For Norco it is hard to locate employees.

Norco, CEO

As a rapidly expanding firm, Norco opted for a GSA agreement to be prepared at an early stage for the potential growth and the expected lack of available expertise in Norway.

6.4.2 Project initiation

The project is currently in an initial phase, no delivery is yet accomplished and potential cultural challenges are yet to materialize. It is an interesting case to review, with respect to the expectations Norco has from their first GSA effort. This section will illuminate the reasons why Norco chose outsourcing to India and what criteria and values were behind the selection of Trivtech.

The choice behind India for GSA activity was basically a coincidence. The CEO was visiting a friend in Trivandrum, India. After a few days on the beach, the CEO decided to do something more useful. He used his business contacts to set up meetings with several software firms, who qualified for Norco's specific business needs. Meetings

with management from several firms were executed over a two-day period. After the initial meetings, the potential firms were narrowed down, based on his prior business experience and gut feeling. Main criteria for selection were professional management, personal chemistry, good communication and the feeling that they were honestly interested in Norco's business. As the CEO of Norco clearly stated:

What is important in finding a partner is that they manage to establish personal relations, this is important both in Norwegian and Indian trade.

Norco, CEO

After the initial selection, Norco visited several potential software firms in the geographical area before choosing Trivtech. The selection was based on the impression Norco received on location at Trivtech and by talking to the developers, and observing the working environment. Norco was very pleased on this regard with Trivtech.

We are dependant on trust, for the customer does not know what he'll receive before it is delivered and paid. It might be few things to take notice of. It can be the company's reputation. If no one has been there before or even heard of it, then the decision must be based on the persons who are representing the company, and that those manage to establish trust and communication. It goes for all commerce and has always been important and will always be important.

Norco, CEO

The selection of Trivtech, a small firm (by Indian standards), was also due to Norco's size hoping that it will give them a higher level of attention and commitment, than they would receive from a larger Indian firm.

The advantage for us as a small company is that we get more attention. We don't have to compete with the large American firms.

Norco, CEO

A reason for selecting a software house located outside the main software areas in India was that prices were lower at such locations, than in the core centers. The CEO was enthusiastic about the potential cost-savings.

It is even lower prices down south, maybe 20 to 30 percent lower.

Norco, CEO

An internal survey at Norco claimed potential savings around 50-60% on the work outsourced to Trivtech. Time will tell if these savings are possible, given the numerous hidden costs of a GSA agreement.

After establishing a preliminary GSA agreement with Trivtech, communication was maintained at the management level, mainly by E-mail. As the CEO explains:

We are often in dialogue, mainly by E-mail. We discuss the various markets internationally.

Norco, CEO

In addition, a meeting conducted in Norway finalized the contracts and showed the commitment to the project from both sides.

6.4.3 Project execution

This stage is yet to start, but the preparation for it has begun. Norco has an employee of Indian origin, with prior working experience from the US. One of his tasks is to coordinate the GSA project with Trivtech. Currently he is on a long-term consultant assignment at DNV (Det Norske Veritas). However, as the GSA project is not currently in full effect, the need for him is not crucial at the moment. His role will be of a Cultural Liaison (CL), “The cultural liaison might be a person who travels back and forth between key stakeholder sites. The liaison’s informal role is to facilitate the cultural, linguistic, and organizational flow of communication and to bridge cultures, mediate conflicts, and resolve cultural miscommunications” (Carmel and Agarwal 2001, p 27). He is expected to bring knowledge of both the Indian and Western/Norwegian business culture and skills to the project, based on his experiences and origin. This can be a vital factor to minimize the potential challenges the GSA can raise.

According to the CL, India has great possibilities due to their analytic nature and a good working mentality. Norco was also in the process of hiring another Indian employee, who currently works on-site at a Norwegian firm. However, he will not play a significant role in the GSA project, and was being employed purely because of his IT-skills.

Norco has analyzed some potential challenges relating to working mentality, creativity, attrition, deadlines, and payments and contracts. These are now discussed.

Working mentality

The Norwegian working mentality was a factor that contributed to Norco’s decision to go offshore. Norco’s view of the Norwegian working mentality is not coherent with the demands Norco has for their employees. The CEO pointed out:

I think the Norwegian working mentality is deteriorated over the last years. We demand high salaries and leave work at four. Come in late and leave early.

Norco, CEO

The Norwegian working mentality worried Norco management, as their business environment is unforgiving and they need quality IT-workers at a reasonable price to help them in their pursuit to the top. The CEO pointed out how these factors contributed to their decision to go offshore:

Instead of hiring a listless semi good Norwegian, I can get skillful foreigners that are willing to give the little extra. I do not care where they come from. Uganda, China or India, it does not matter.

Norco, CEO

However, there are business concerns about using outsourcing as an open business practice. As the CEO stated:

The only concern is that our customers unconsciously dislike this practice. But I should be a good enough salesman to avoid it being an issue.

Norco, CEO

Creativity

Norco rates the Indians analytic nature as both a pro and a con for the project. While they viewed the Indian university education is of a high quality, and the people's mentality are highly analytic, Norco also recognized the lack of creativity:

They lack creativity. You will not find the same will to perform in order to achieve a good system, if it is outside the specs.

Norco, CEO

For Norco to get the product they want, they need to focus on closely specifying the requirements of the product. Moreover, it will require follow-up with project management and tight communication with their client and Trivtech. Norco saw no need to use Indians on-site, unless a client of Norco required it for implementing or analyzing their requirements. However, with two Indians at Norco they potentially have the internal knowledge and expertise available to minimize a part of this challenge in advance, as a part of the Indian mindset is located in Norway. If challenges arise that cannot be solved by the regular communication links or internal competence, Norco's project management will travel to Trivtech gain equilibrium again through negotiation and clarification.

Attrition

Salaries in the outskirts of the Indian high tech cities, like Hyderabad and Bangalore, are considered to be 20 to 30% lower. This can accelerate the attrition at such firms, as the employees have more choices for their career in the high tech cities. Nevertheless, as Norco was in an initial phase of the project it seemed uncertain if attrition will affect the relationship. An inhibitor for attrition at Trivtech is that they have attracted prestigious customers, like Toshiba, for which they develop Computer tomography (CT) software. Working with these type of clients make it a more attractive and prestigious workplace for the employees.

Payment and contracts

The initial contract between the two firms has been agreed upon. The payment structure is based on man/hour. Furthermore, Norco aims to use tight control, and if the client is not satisfied with the resource use at Trivtech, Norco will withhold the payment. This system has not been applied in the project at time of writing, but can potentially be problematic.

Deadlines and milestones

The potential risk of failure in deliveries is still unknown in this project. As a measure to ensure that the project deliveries are on time and satisfactory, Norco has decided to have project management at their location, to have control and visibility in the project. Their CL will try to act as a link between Norco and Trivtech project management and try to build a tight link to nurture the relationship and communication with Trivtech.

6.4.4 Future

Norco's future predicament is that they potentially will set up a production site in India if the volume of orders is high, if Trivtech will be a part of that will be based on the experiences gained in the next few years. Furthermore, Norco predicts that they will see a mix of Norwegian and foreigners working at Norco. Not in terms of body shopping, but as 100% Norco employees, recruited from around the globe.

6.5 Summary chapter 6

This section has presented the cases of three firms with a view to illuminate the cultural challenges of a Norwegian-Indian GSA. It has presented challenges of local culture, complexity, knowledge sharing and approach to deadlines, which will be further discussed in the following chapter. Furthermore, it has presented the expectations that small Norwegian firms has to GSA, and how these changes through experience and maturation.

The next chapter presents the analysis in this thesis, where the material presented throughout the thesis will be used to see how cross-cultural issues can affect GSAs in a Norwegian-Indian context.

Chapter 7 Case analysis

7.1 Introduction

This chapter discusses the cultural challenges identified in the case chapter, which showed that certain unique challenges arise in GSA, compared to traditional collaboration, including issues of culture, distance, language and time. These issues raise the central questions discussed in the thesis:

- *What are the cultural challenges of GSA work in the context of Norwegian and Indian GSAs?*
- *How can they be managed more effectively?*

Building on these research questions this analysis aims to identify cultural differences in terms of mindsets, communication and local variations, and analyze these challenges using the theoretical framework developed in chapter three.

The Norwegian firms did not re-organize greatly their business and organizational structure to enter into GSA, mainly because the decision to go offshore was done at an early stage in the firms' lifecycle. But "where the rubber hits the road", there have been challenges in the relationships. Three key challenges identified in the case are:

- Different attitudes to time;
- Varying communication styles; and
- Knowledge sharing problems.

The research shows that these challenges are implicated in culture. In the analysis, I draw upon some key concepts from structuration theory which has been presented in chapter three to provide the basis for my theoretical framework. This structural analysis helps to look at the challenges in a deeper way, and to understand why they occurred. Moreover, how they can be addressed in a context sensitive manner.

7.2 Structure

Giddens describes structures as rules and resources that actors draw upon as they produce and reproduce social practices (Layder, 1994). The interactions between the modalities of structuration are interconnected, and actions of the actors mutually affect the modalities, resulting in a more broadly shared structure (Olesen and Myers, 1999). The GSA relationship studied can be seen to consist of two key structures, related to attitudes to hierarchy and work.

In the following section, I elaborate on these two structures, and in the last part, I discuss how these structures shaped the challenges discussed in the introduction to this chapter.

7.2.1 Attitudes to hierarchy

All human actions imply power, meaning the capability to produce an effect. It is the ability to make a difference in and on the social world (Layder, 1994).

Power involves the exploitation of resources, resources which are structured properties of a social system, drawn on and reproduced by knowledgeable actors in the course of interaction (Rose and Hackney, 2003, Giddens, 1984). Resources can be authoritative, which come from coordination of activities of actors, and allocative, which come from the control of material properties (Rose, 1998), both applicable in a GSA, as it is a relationship based on knowledge and resources. However, the extent of one's influence is limited by the resources at one's disposal, and power is never an unlimited capacity, as actors always have some resources at their disposal with which they can seek to alter the balance of the power relationship (Layder, 1994). For instance, in a GSA with one dominating actor, the other part always has some leverage, as they can withhold resources or refuse to deliver work. Also, as the Indian companies gain more knowledge as of the technology, the knowledge differential between them and Norwegian firms can be seen to reduce, thus altering the knowledge-power dynamic.

As interpreted from the case, the structure related to the hierarchy from the Indian perspective can be characterized to be based on a respect to authority. This can be interpreted as arising from two conditions. The first relates to the historical situation in India characterized by the caste system, which has five different levels and is a historical hierarchy to keep the society functional. There is a hierarchy inherent in the caste system, one which is given to you from birth and can not be changed. Hierarchy is thus inevitable in the Indian way of life. In India it has been reported by other researchers that disagreements are rarely expressed in a direct manner. The cultural issue of "can't say no" can be connected to the Indian submissive nature, and them not being forthcoming to communicate negative feedback towards authority figures. This cultural trait is also possibly influenced by the colonization time and the caste system, as compared to the Europeans who would tend to challenge authority figures and explicitly express that they don't agree (Nicholson and Sahay, 2001). The Norwegian perspective on hierarchy can be characterized by its socialist system of government,

and a high respect for egalitarianism. Norwegians are concerned about equality among people and tend to dislike injustice, and show a high need for consensus (Archetti, 1984). These different structures in India and Norway with respect to hierarchy can be seen to influence for example, communication styles, how direct or indirect they are.

The second issue shaping structures of hierarchy can be seen to be related to the nature of the vendor-contractor relationship which shapes the power relationship as there are different allocative and authoritative resources at each other disposal.

In GSA the role of supplier is partly dependant on the client's, potentially creating a more authoritative view of the client in the relationship. This thus consciously and unconsciously shapes a more submissive behavior from the contractor. Milgrams (1974) well known research has shown that humans show obedience and submit to higher authority, even though it may go against their ethical convictions.

Local culture can be used as part explanation for the challenges experienced in the project, as the differences in norms, values and working methods due to national characteristics are closely related to social distance, which means the actors familiarity with each other's way of working (Ford 1982). The actors perception of each other was that, "you and I are not so different", but coupled with other inhibiting factors, as ICTs and distance the 'little things' were easily magnified and created the magnitude of these challenges. These structures both enable and constrain actors in different ways.

7.2.2 Attitudes to work

Legitimation is described as the norms that actors draw upon in justifying their own actions and that of others. Norms can be seen as rules or way of doing things, providing moral sanction to social actions, and are shaped by the expectations of the actors' rights and obligations, and guide the social actions by legitimacy and moral validity. While the facility to allocate resources is enacted in the wielding of power and to produce and reproduce social structures of domination, moral norms help determine what can be sanctioned in human interaction, which iteratively produce structures of legitimation (Rose, 1998). The institutional property of legitimation is constituted by tradition, rules, rituals, and practices of socialization (Giddens, 1984, Orlikowski and Robey, 1991), and we see in the GSA studied that two diverging norms shaping the structures in the relationship on the societal and organizational levels. In terms of the societal level, the differing cultural identity led to challenges in terms of interpretation and expectation of behavior between actors in this GSA. On the organizational level, an inexperienced, with respect to GSA work, flat Norwegian structure met the an experienced Indian hierarchal structure, with added weight put on authority and power locations, which might have been unfamiliar for Norwegians used to a more egalitarian system.

Attitudes to work were also shaped by prior experience of both sides in working with each other and in particular technologies. The Norwegians had limited experience in GSA work and also with India. The Indians on the other hand had not worked much in

Scandinavia, but had some experience of such work in North America, but primarily work on more structured and maintenance kind of projects, as compared to the Norwegian higher technology work. This mismatch of experience between Indian and Norway was potential cause of friction as feeling of control was vital for these Norwegian firms, and they worked to great lengths to feel and gain control of a situation, actions which can be related to limited trust of the other.

At the societal level, the diversity of local cultures, including the mindsets of the actors was an influential factor, contributing to the challenges experienced. The case analysis reflects how differences may influence cultural identity, as has also been argued by Hylland Eriksen (1993):

“The shrinking of the world entailed by globalization seems to lay pressure on their identity as distinctive: the old familiar is replaced by the new and foreign, and threatens to erase one’s uniqueness. In this way, the pressure from cultural complexity and globalization is at the root of the modern identity crisis, where ethnic identities are often seen as a solution in the face of the disappearance of boundaries.” (Hylland, 1993, pp 18, italic added)

Differences in mindsets, work habits and time and space configurations between the actors in a GSA were challenging for the management of the GSA, including issues of developing cross-cultural relationships, use of ICTs, and bridging gaps in terms of mutual understanding and knowledge sharing. An explanation for these challenges can be seen in that individual societies tend to have distinct ways of working, and these idiosyncrasies can prove problematic when attempting cross-cultural collaboration (Krishna, Sahay and Walsham, 2004). Local culture, norms and values creates a cultural bias, which shapes how we interpret and judge phenomena’s, in particular to one’s own culture (Wikipedia, 2005). Stereotyping of Norwegian and Indian actors in GSAs can be problematic, for instance if we reflect on Norwegian cultural traits, we note a significant amount of reclusiveness and individualism, but a stereotype often has a negative association bordering on bigotry, which use stereotypes to say *all* members of a national culture are alike (Carmel, 1999). A pre-made perspective can decrease predictability and create a stringent view of the other in a GSA context, impeding learning and maturation.

According to the Norwegian Export Council Indians have approval-based values, indicating that their values are aimed at gaining mutual support, amiability, kinship, loyalty and a collective mindset (Rohatgi, 2003). Private business in India is often described as drawing upon family values such as the respect for paternal authority in the conduct of business, with relatively reduced emphasis on developing ‘professional’ management practices (Sahay et al., 2003), this is in contrast to the western business practices, where family values tend to be downplayed in the business culture.

Norway has a small population, geographically peripheral and a short history as an independent state, and so to outline the Norwegian national identity requires learning from the country’s history, as constructed and distinguished from other European

countries (Hylland, 1993). Norwegians do not see themselves as urban people, but as rural, implying that they are not cosmopolitan and easy going, but rather private and introvert. Norway can also be described as an egalitarian nation, where the separation of classes has been small. The Norwegian Export Council argues that Norwegians have result- based values, indicating an orientation towards accomplishment, success, independence, individualism, ambition, motivation, personal growth and development (Rohatgi, 2003).

A challenge when foreigners collaborate with Norwegian firms is that Norwegians are difficult to befriend, as Norwegians jealously guard their personal space and seem worried and slightly afraid when confronted with strangers (Hylland, 1993). The Norwegians may be afraid of making promises which they might break in the future (Archetti 1984, Hylland, 1993), thus possibly explaining the reluctant attitude towards new people because of the fear of ending up with a friendship. This attitude might have affected the relationship in terms of added time needed in gaining the knowledge of each others' interpretations, as the Norwegians can tend to guard their space. However, this stands in contrast to the Indco developers' positive perspective of Norwegians, when on-site in Norway. Norway was an unfamiliar arena for the Indians, and their interpretation of attitudes and norms was initially, to a certain extent, based on American norms formed while working with firms in the past. This expectation was according to the Indians pleasantly wrong, seeing that the Norwegians were more considerate and showed more patience than their American counterparts.

Creativity and innovation is based on the environment where the ideas evolves, and are important to understand these notions in the relationship. For Indco structured work is more familiar, and typically the type of work outsourced to them varies from basic coding to maintenance tasks. In the Arctic project, the knowledge was ambiguous, as the project's nature was highly innovative. Thus, the project fitted the less structured criteria, demanding more emphasis on joint collaboration and relationship building issues. While Indco has an organizational aim towards less structured development to differentiate themselves from other Indian firms and the potential Chinese competition,

The majority of projects they work with are more structured in nature.

Less structured work entails a greater tolerance of risks, and greater experience in sharing knowledge that is not explicit and towards creating a shared environment to minimize these risks.

The Indian education system focuses on hard IT-skills, often deemphasizing the social and human processes required for facilitating not so structured work. This focus on hard technical skills is also to a certain degree reinforced by the Indians norms and work habits. For example the attitudes to hierarchy and sense of compliance can be seen to be compatible with the focus on hard and routinizing skills, emphasized by the educational system.

7.3 A structurational approach to analyze the challenges

As discussed in the introduction of the chapter, 3 key challenges were identified from the case study:

- Different attitudes to time;
- Varying communication styles; and
- Knowledge sharing challenges.

In structurational terms, these challenges can be viewed at the level of human interaction, and which are shaped by structures through the modalities of interpretation, facility and norms. I now discuss how the two structures, related to hierarchy and work, described earlier, shape and are shaped by these challenges.

7.4 Attitudes to time

At the level of human interaction, some of the challenges arising from the different attitudes to time of the Norwegians and Indians can be summarized as under:

- Time overruns were frequent.
- Norwegians were frustrated that they were not informed earlier about the deadlines.
- Changing requirements led to more time usage, and overruns.
- Different interpretation of when a project or phase is “closed”.

The differing structures related to attitudes hierarchy and work can be seen to contribute to these challenges of time. A challenge evident in the Arctic-Indco project related to deadlines was Indco’s inability to firmly say no to Arctic’s additional requirements, even when they knew that the added work would make a deadline increasingly difficult to meet. While Indco managers acknowledged this problem, they argued that it arose because of the manner in which Arctic increased the scope and added requirements on the project. This indicates a classic client- vendor relationship, where the client has the decisive power and the vendor the obligation to follow the constantly changing requirements on “their time.”

The research showed that if Indians found an issue difficult, they would avoid expressing it openly. For example Indco knew that the added requirements and scope changes would delay the project, but they did not inform Arctic, until it was too late. Indco’s perspective was that they had insufficient knowledge of the overall project, while the client had the full knowledge and so the correctness of the time estimated was the responsibility of Arctic rather than theirs. An example given by an Indco manager illuminates this issue: If a project was initially estimated to 200 hours by Indco, and the client claimed it could be finished in 100 hours, Indco wouldn’t say that it can not be completed in that amount of time, because even if they tried to negotiate, they believed the client were in a better position to know the overall project status and

time limits. This challenge was peculiar, as Indco claimed they were aware of the effect the new requirements would have on the deadlines, but seemed unable to transmit this to Arctic, thus contributing to major time delays and a near breakdown. This issue was discussed among the Indco managers and most agreed that the area needed improvement, but the deeply held structures of hierarchy influenced their behavior. The problem thus escalated.

Structures related to attitudes to work can also be seen to influence this challenge related to time. Changes of scope and added requirement was not a significant challenge in the early phases, as the project was then overstaffed by Indco due an overestimation of the size of the project. However, Arctic claimed this overestimation was a gift for them, as the end product would not have been as good without the initial failure in the estimation process. Possibly, initially more work was completed than estimated, but this overstaffing may have led to larger scope changes, as Arctic overestimated Indco's delivery capabilities. When Indco reduced the size of the team, consisting of 5-6 members, it influenced the expectations of the Norwegians, thus contributing to time related challenges.

The delay resulted in negotiation meetings in India between the two sides, Indco argued for more flexibility from Arctic's side, as the current deadlines were seen to be too rigid. However, Arctic was emphatic that a deadline was a deadline, and new deadlines would not be issued. GSA and India was an unfamiliar arena for Arctic, and their perspective on how business was conducted in this context was unclear, and the interpretation of deadlines was based on Norwegian norms. This was a common perspective from the Norwegian business environment that Arctic was used to, but did not apply directly to the Indian way of business. Indco, on the other hand, had little prior experience with Norwegian practices, which was alien to Indco working with their first Scandinavian customers.

The understanding of time issues differed, seeing that Indco did not appreciate being rushed into quick decisions, for instance changes in scope, and feedback concerning its effect on the project. In Norway promises are seen to be binding and not easily neglected, which influenced the Norwegian perspective of deadlines as being fixed, which Indco's felt lacked flexibility. Arctic struggled to fully understand why it was hard for Indco to grasp the meaning of a deadline as an absolute limit, which however, could be openly discussed. The Indians not keeping the deadlines nor discussing it, made the Norwegians frustrated.

Also contributing to the time issues was the innovative nature of the Arctic-Indco project, as the Indco management struggled to grasp the full overview of the project. This challenge was seen by the Norwegians arising from the lack of a creative mindset in India and awareness of the challenges that such projects brings forth. This challenge can be partly attributed to the historical nature of projects that Indco had engaged with primarily North American customers on bug fixing and maintenance projects rather than new designs as the current project entailed. In the project closure phase, the Indians sent the version for finalization to the Norwegians, who thought the project

was “closed”, as contrasted to the Indians who expected a reply of the “beta-version.” These different interpretations on project closure led to delay and frustration.

In summary, the two structures concerning attitudes relating to hierarchy and work can be seen to influence the attitudes to time in the following way.

Table 7.1: Attitudes to time.

Structure	Structure-action relationship
Attitudes to hierarchy	<ul style="list-style-type: none">• The Indians are fearful to say “no”.• Norwegians insist on regular changes of scope and requirements.• Norwegian deadlines guided the project.
Attitudes to work	<ul style="list-style-type: none">• Different interpretations of when a project phase is completed.• Lack of familiarity with each others working practices.

7.5 Communication styles

Communication challenges were evident throughout the Arctic-Indco project. The following characteristic of communication can be seen to contribute to the experienced challenges:

- Experience of long delays in receiving responses.
- Insufficient opportunities for informal communication.
- Lack of familiarity with some communication tools.
- Lack of richness in communication.

The Indians had greater experience than the Norwegians in ICT based communication in the context of GSA work. They preferred quick replies from their customers, and saw E-mails as a favoured tool in of the trade. While working with North American clients, the Indians were used to very rapid responses to E-mails. However, Norwegians because of their experience of more face-to-face contact, and societal norms of not working on weekends or having long working hours, were much slower in responding to E-mails. These different expectations of what is an “appropriate” response time, led to frustration on both sides.

Communication was also influenced by the hierarchal organization at Indco, where typically the developers communicated with the client through or after the approval of the Indco managers. This required the respective managers to understand more deeply both the technical and social issues. However, because of their time pressures, such understanding was not easy to develop.

Phone conversations, while being relatively rich, was difficult to implement effectively in practice because of the relative unfamiliarity both sides had with each other. In the absence of being able to put a face to a name, in the initial stages, phone conversations were seen to be not so effective. This was further magnified by the Norwegians traits of being rather introverted and reserved in nature, and difficult to befriend easily. A shift in this challenge occurred with a higher level of maturation building on experience, making phone conferences easier and more suitable for knowledge transfer between the two sides, which further contributed to stronger alignment and trust of each other.

Initially, formality characterized the communication, contributed to some of the reasons discussed earlier. However, a shift in the style of communication occurred after the two Indco developers were on-site in Norway. Communication was experienced to become more informal, free and easy flowing. This shift also signified a shift in the hierarchy the earlier communication was usually based upon. This more free flow of communication also added clarity to the requirements between the sides, and with it an increased familiarity and trust between the actors. This also led to an easier and free use of some of the ICTs, like phones and E-mails, which contributed to the growth of a shared context that then supported a higher level of knowledge sharing

than previously. Grenness points out that open and productive communication is dependant on a certain degree of trust. Distrust to the sender due to lack of credibility, intentions or power struggles between sender and receiver can lead to ineffective communication (Grenness, 2004, p132). In the case studied, the on-site visit helped to build the credibility, clarify the intentions, and neutralize some of the power differentials, all of which contributed to more effective communication which in turn helped to redefine some of the existing structures relating to attitudes to hierarchy and work.

Communication competence is dependant on the specific relation one has to other human beings. According to Weick (1987), inter-human communication is the most important quality in organizations, because it helps create structures that determine what is said and done (Grenness, 2004). Communication is a dynamic process that evolves and changes over time. When communication processes are repeated over time with the same actors and the context and social practice becomes reasonably stable over time and space, then routines will be developed, which become taken for granted activities of daily social life (Rose and Hackney, 2003), and an embedded part of the GSA. This affects the interactional level between the actors, contributing to a shift in the structures for the actors, leading towards a shared context, which over time may take the forms as institutionalized practices (Olesen and Myers, 1999).

However, communication processes became less challenging in the later stages, mostly due to maturation processes, which laid a foundation for a more accurate interpretation of the knowledge. This indicates that structures are not rigid and unchanging, but human actors have the agency to redefine them based on their knowledge and capacity. The relationship between the structures and communication can be summarized in the table below.

Table 7.2: Communication styles.

Structure	Structure-action relationship
Attitudes to hierarchy	<ul style="list-style-type: none"> • Indian developers hesitated to write directly to managers. • Norwegians preferred flat style, while Indians more hierarchical.
Attitudes to work	<ul style="list-style-type: none"> • Lack of trust in the communication tools used. • Different views on what is appropriate “response time”. • Initial formal communication, which changed after on-site visit.

7.6 Knowledge sharing challenges

Knowledge sharing across cultural borders was identified as a challenge in the GSA, and some of the constraints are now summarized below:

- Lack of precision in sharing knowledge.
- Knowledge sharing in complex projects is more problematic.
- All knowledge could not be transferred.

Preciseness in requirement sharing was hard for the actors due to time-pressures, constraints of ICTs and lack of shared norms. This resulted in the use of more resources to secure a correct interpretation of knowledge which was often still not forthcoming. Knowledge sharing problems arose due to the differing interpretations on project norms and requirements.

In general, in the initial stages, the Norwegian attitude was that the Indians had a high level of IT-skills, but lacked the creative edge. The Norwegians wanted to be specific about precise requirements, as they regarded that the Indians had limited capability to think outside the framework of specifications, an interpretation based on the Indian structure of hierarchy and work systems.

Indco was relatively inexperienced with working with Scandinavian firms and with projects that were highly innovative in nature, since their experience was primarily on bug fixing and maintenance tasks, most commonly gained from North American relationships. Also the educational system can be seen to shape the work attitude focused on hard software skills, contributing to shaping an Indian work structure based on the ability to deliver large volumes of software, but requiring lower degree of innovative and creative abilities.

However, a pre-made opinion, as the Norwegians had of Indians lack of creativity, can cause a fixed pattern of behavior, which reinforce a traditional structure of a contractor-client relationship, where lack of trust and need for control dominate. Such a structure is inherently contradictory to the requirement of innovative projects, which imply the need for more freedom.

Indian firms thrive on emphasizing quality through CMM certification. There are the most number of Indian firms certified with CMM level 5 than elsewhere in the world. While CMM certification helps to provide a degree of predictability in the process, and also global legitimacy, they induce a high burden on documentation and structure which to a certain degree can be seen to stifle the space for creativity and innovation.

Like other Indian firms, Indco were striving to follow CMM norms, something which is more appreciated by North America customers. The Norwegians, not really used to or interested in CMM, and the baggage that goes with it, felt that the work process in Indco were rigid and constrained to the need for innovation.

Norwegians can be seen to have a reserved attitude, protecting their feelings, thus the challenge of understanding Norwegians through ICTs takes time and knowledge of their norms. Arctic lacked experience in collaboration with complex tasks at a distance, and scope and requirement changes were prominent. The failure to predict the result of these changes on the project can not solely be blamed on Indco, but needs to be shared. However, the lack of shared understanding on the creative and innovative aspects of the project also contributed to the fact that such ideas are hard to transfer through ICTs, and the lack of a shared context. Also contributing to these challenges were communication issues, as much of such knowledge is transferred through body-language and visualization, and distance and cultural differences inhibit such projects.

On-site presence increases predictability, as co-location provides a major source of information utilized in the production of social encounters (Giddens, 1979), and helps to build and reinforce a shared context. Practices in GSA become stable over time and space with increased experience, resulting in a more broadly shared structure shaping institutionalized practices (Olesen and Myers, 1999). This creates stability in the GSA environment and with it more predictability, thus reinforcing the established GSA structure. The on-site visit of the Indians to Norway provided the trigger to remove some of the existing constraints to knowledge sharing, and open up spaces for the creation of new structures based on increased familiarity and trust. The relationship between the two structures and knowledge sharing can be summarized in the table below.

Table 7.3: Knowledge sharing challenges.

Structure	Structure-action relationship
Attitudes to hierarchy	<ul style="list-style-type: none"> • Norwegian wanted control to ensure creativity which they felt the Indians lacked. • Knowledge transferred on Norwegian terms. • Little flexibility to change the Norwegian deadlines.
Attitudes to work	<ul style="list-style-type: none"> • Indians used frame of reference based on their North American experiences. • Norwegians had limited view of Indians creative skills.

7.7 Summary chapter 7

Cross-cultural challenges were evident through the differing structures in the Norwegian-Indian relationship. This chapter has identified two differing structures, attitudes to hierarchy and work, and discussed the challenges these structures brings forth in terms of time, communication and knowledge sharing through a structurational approach. The next chapter presents the conclusion of this thesis.

Chapter 8 Conclusion

This research started with two key objectives of understanding cross-cultural challenges in Norwegian-Indian GSA relationships, and identifying approaches to address them more effectively. In the previous chapter, I identified three key challenges, and presented a structurational analysis to gain a deeper understanding of why they occur. In this concluding chapter, I reflect upon certain approaches to address them. The approaches are also applicable to other small firms entering into GSAs, especially in the context of Norwegian-Indian relationships.

We have seen that the process towards a successful GSA is complex, contributed by the emerging challenges of cross-cultural collaboration, a point also emphasized by other related research (Sahay et al., 2003). These challenges are magnified in more complex technology projects. This makes awareness and comprehension of cultural challenges vital to managing GSAs more efficiently and effectively.

In the previous chapter, three key challenges were identified:

- Different attitudes to time;
- Varying communication styles; and
- Knowledge sharing problems.

The research identified the importance of deep rooted social structure in the Arctic-Indco case, and their influence on human action. With the stretching of social systems across time and space, the social actions also are extended, and the embeddedness of those practices increase (Rose, 1998, Layder, 1994). Managers easily gain a superficial perspective of GSA through different business strategies, but for a deeper knowledge they need to look at the structures of social practice emerging in GSA, and drawing from our structurational analysis, I identified three sets of management guidelines to address the above identified challenges, they are:

1. Increasing “human touch” through face-to-face interaction.
2. Level of commitment: “partner” rather than “contractor”.
3. Enhanced knowledge about cultural issues.

These are now discussed.

8.1 Increasing “human touch” through face-to-face interaction

Management should acknowledge the importance of face-to-face contact, as it can be seen as a bridge builder in terms of mutual understanding and helps evolve the relationship towards one global team. Face-to-face contact entails higher costs, but benefits the GSA in a long term perspective, enabling more complex technology tasks to be undertaken

Encouragement of personal touch in the relationship increases the social solidarity and helps to quicken maturation processes. In the Arctic-Indco case, on-site collaboration was a key to the added closeness which removed inhibitors of distance and ICTs. This supplied the relationship with a personal touch, trust and increased richness in knowledge sharing. This entailed an escalation in maturation processes.

The set of personal and business values the two sides bring into the relationship can be a hidden factor without on-site collaboration. Other researchers have pointed out that teamwork is connected with a list of challenges, and most bad experiences are due to divergent personal matches leading to cooperation challenges (Svedberg, 2002). Face-to-face contact helps to identify such challenges and actions can more easily be taken to align the diverging mindsets, an enhancing of cross-cultural collaboration.

8.2 Level of commitment: “Partner” rather than “contractor”

Management should focus on raising the GSA relationship from a classic vendor-client relationship towards a true partnership. This move signifies more trust between the actors and a shift of traditional power structures, and enhances the ability to undertake more complex task based on increased knowledge. In a contractor mode, the partner is always mistrustful about the future, and acts to please rather than deliver.

A partnership encourages more openness in the relationship. In the Arctic-Indco case the relationship evolved from a professional relationship based on time, money and skills, to a project with fundamentals on mutual friendship and trust. The achieved openness in the relationship enabled Arctic and Indco to discuss issues more frankly. This process was, as reviewed, not without challenges and a near-breakdown. However, the maturation processes was required to align the diverging structures related to hierarchy and work norms. However, the end result was beneficial.

Maturation in GSA relationships can be seen as an evolving process. Based on the actors experiences it took approximately six to twelve month to develop a sound relationship, involving significant managerial efforts. At this stage, the understanding level reached an acceptable level giving the actors a greater shared context.

8.3 Enhanced knowledge about cultural issues

The actors should be made aware of the norms and culture in Norwegian-Indian GSAs.

Some Indian firms have used anthropologists to learn about the other country's cultural identity and history with success (Sahay et al., 2003). Such increased awareness helps to raise the knowledge of the divergent mindsets of the actors, which is helpful in understanding patterns of behavior arising in cross-cultural collaboration, creating more trust in the relationship. In familiarizing the actors at an early stage of the cultural issues, benefits to the relationship are achieved in easing the process of sharing knowledge, and minimize some challenges as experienced in the discussed case.

However, human beings are fundamentally different and a generalisation such as that region A collaborating with region B will not experience challenges, but region C and A will, can be difficult to make due to the diversity of human beings and cultures. The challenge of personal factor can be just as evident in a Norwegian firm as in a GSA. A personal example of this view is from parent-teacher meetings at my daughter's school where I meet other Norwegian parents from different walks of life. Puzzling me was that I felt I communicated better with the Indians I lived with and the Indco staff. Seeing that I and the other parents share the same nationality, but the similarity often ends there. An explanation is that we who work in the software industry may share some of the same references in our lives, rather than the fact that we come from the same country.

8.4 Concluding remarks

In this thesis, I have analyzed cross-cultural challenges of Norwegian-Indian GSA and some approaches to address them. Such analysis makes useful contribution to both conceptual understanding of GSA work, and also managerial implications. Such contributions are increasingly important as there are very limited empirical studies involving Norwegian firms. Also, as Norwegian firms become increasingly active in the GSA domain, such analysis can help them understand that cross-cultural challenges are always prevalent, but not insurmountable.

8.5 Future research

Several parts of this study could be further elaborated. Norco's case would have been interesting to continue researching on, as the thesis is mainly built around the Arctic-Indco case. This would have been useful in order to validate some of the findings and also to identify potential structural differences and changes between outsourcing structured and less structured work in a GSA context.

Arctic and Indco are still collaborating, and following their journey towards a JV would be interesting in light of the structures identified. One objective would be to

evaluate further changes in structure based on the collaboration form. Furthermore, to see how new team members, both Norwegians and Indians, adapt to the established relationship structures.

A related, interesting project could be to focus on less structured work in the GSA context and the structures role of shaping the developed software, by using collaboration forms between Norway and India based on less hierarchical relationship and client-contractor norms.

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Appendix A

Acronyms

ASP	Applications service provision
BPO	Business process outsourcing
CAD	Computer-Aided Design
CEO	Chief executive officer
CL	Cultural Liaison
CMM	Capability Maturity Model
CT	Computer Tomography
DNV	Det Norske Veritas
ERP	Enterprise resource planning systems
EU	The European Union
GM	Group Manager
GSA	Global Software Alliances
HISP	Health Information Systems Project
IBM	International Business Machines Corporation
ICT	Information and Communications Technologies
IEEE	Institute of Electrical and Electronic Engineers
ISO	International Standards Organization
IT	Information Technology
JV	Joint Ventures
MNC	Major National Corporations
NASSCOM	National Association of Software and Service Companies
PL	Project Leader
PM	Project Manager
R&D	Research and development
RFP	Request for Proposal
STPI	Software Technology Parks of India
TCS	Tata Consultancy Services
UAT	User Acceptance Testing
UK	The United Kingdom
UNDP	United Nations Development Programme
US	The United States

Appendix B

Interview guide

1. Explain the start phase of a standard outsourcing project
2. What are the main challenges for today's Global Software Alliances?
3. What does the future hold for GSA?
4. Do you think uncertainties in the western market have been a key to increase outsourcing to India?
5. To your understanding, what are the main reasons for European firms to choose outsourcing to India?
6. Where does your firm prefer to hire employees from: school, returned Indians or other firms?
7. How do you build and secure a long term relations between firms?
8. Are the payment mechanisms on time basis or\and material basis, or is it also based on royalties?
9. Do you feel adequately rewarded for the knowledge you bring into the process?
10. What cultural challenges appear in GSA?
11. How can we (firm and individual) work to overcome these potential challenges?
12. How do you think the multi cultural environment affects the employees at a local level?
13. What are the main differences in mind set between Europe and India?
14. What challenges does distance and time differences raise, and how are they minimized?
15. Does ICTs have enough depth to minimize the possible communication challenges?
16. Have there been any conflicts\problems due to cross cultural issues. If so, how are these handled by the firm?

17. How are contractual issues between your firm and its employees?
18. Is attrition a challenge for the firm? How do you try to avoid attrition?
19. What explains the high attrition rate in Indian Software industry?
20. How we perceive the development process in a cross cultural relationship.
21. Are there any cultural differences in the software development cycle (requirements)?
22. How are the training and further education done at the firm?
23. Through your experiences, what are the main differences in IT-skills between Europe and India?
24. How would you describe the teamwork and relationship between your firm and the western partner?
25. What is your perception of the western work mentality, and compare it with the Indian work mentality?
26. Do you feel there is increased stress on the employees in a cross-cultural environment?
27. Where is the power located in the outsourcing relationship, who is in control?
28. Do you feel there are any differences in flexibility, freedom and improvisation in the workplace when you compare India and Norway?
29. Do you encourage employees to go on-site? What is this decision based on?
30. Describe the communication process between a client and your firm?
31. How is the communication process between the employees and the client?
32. Are there any informal channels of communication between the employees at the two firms?

33. What does it take to be a successful IT-employee in India and in Norway?
34. What have you learned from the projects?
35. What can be improved in the projects?